# ...IMENTATION PAGE

Form Approved
OMB No. 0704-0188





| 2. REPORT DATE | 3. REPORT TYPE AND DATES COVERED |
|---|---|
| May 1992 | Final Report (07-91 to 07-92) |

**4. TITLE AND SUBTITLE**
A Cost-Effectiveness Analysis of Proposed Inpatient Child and Adolescent Psychiatric Units at Eisenhower AMC

**5. FUNDING NUMBERS**

(2)

**6. AUTHOR(S)**
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**7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)**
Dwight D. Eisenhower Army Medical Center
Fort Gordon, GA
30905-5650

**8. PERFORMING ORGANIZATION REPORT NUMBER**
4A-92

**9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)**
U.S. Army-Baylor University Graduate Program in Health Care Administration
Academy of Health Sciences, U.S. Army (HSHA-MH)
Fort Sam Houston, TX 78234-6100

**10. SPONSORING/MONITORING AGENCY REPORT NUMBER**

**11. SUPPLEMENTARY NOTES**

**12a. DISTRIBUTION/AVAILABILITY STATEMENT**



**12b. DISTRIBUTION CODE**

**13. ABSTRACT** *(Maximum 200 words)*



**14. SUBJECT TERMS**

**15. NUMBER OF PAGES**
95

**16. PRICE CODE**

| 17. SECURITY CLASSIFICATION OF REPORT | 18. SECURITY CLASSIFICATION OF THIS PAGE | 19. SECURITY CLASSIFICATION OF ABSTRACT | 20. LIMITATION OF ABSTRACT |
|---|---|---|---|
| N/A | N/A | N/A | UL |

# A COST-EFFECTIVENESS ANALYSIS OF PROPOSED INPATIENT CHILD AND ADOLESCENT PSYCHIATRIC UNITS AT EISENHOWER ARMY MEDICAL CENTER

A Graduate Management Project

Submitted to the Faculty of

Baylor University

In Partial Fulfillment of the

Requirements for the Degree

of

Master of Healthcare Administration

by

Captain John F. Jessop

28 May 1992



Running Head: CHILD AND ADOLESCENT PSYCHIATRY

**Acknowledgements**

Many people have helped me through this trying effort, but my love and special thanks go to my wife Lisa, and our three sons: Justin, Jordan and Jonathan.

My hardiest thanks and gratitude go to COL Jack Bradford, my Preceptor and Mentor - Sir, I actually finished my paper!

My thanks also go to:

MAJ Buddy Rogers, my primary reader, who willingly accepted the tasks of reading my work and providing constructive criticism.

LTC Dennis W. Dohanos and MAJ Kyte, my secondary readers, both of whom are capable, bright and competent individuals with whom I would gladly work if ever given the opportunity.

MAJ Michael Wheeler, car pool driver, confidant and friend; if you want the truth, talk to him.

MAJ Joe Butler, fellow Baylor Bear and soon to-be member of my rating chain; he read my paper - if that isn't friendship I don't know what is.

Mr. Philip Feisal, Administrator, Charter Hospital of Augusta, who gladly welcomed me into his facility.

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**Abstract**

Child and adolescent psychiatric expenses comprise the largest portion of psychiatric disbursements made by the Civilian Health and Medical Program for the Uniformed Services (CHAMPUS). The Army Medical Department (AMEDD) and its subordinate healthcare facilities have been forced to place dependent children and adolescents in the care of local civilian psychiatric facilities due to a lack of inpatient child/adolescent psychiatric facilities in the Army.

This study sought to determine if creating an inpatient child and adolescent psychiatric ward at Eisenhower Army Medical Center (EAMC) would result in a substantial CHAMPUS cost avoidance for EAMC. The author collected workload, manpower, expense, and population data from the Defense Medical Information System (DMIS), from local child and adolescent psychiatric facilities, and from various members of the EAMC staff.

The results indicated that creating an inpatient unit at EAMC would not be cost effective based on the recent advent of partial hospitalization. The creation of a partnership with a local child and adolescent psychiatric institution would be far more cost effective for EAMC than would creation of an inpatient unit.

## Introduction

Nation-wide utilization of both inpatient and outpatient psychiatric services by children and adolescents has dramatically increased over the past ten years (Weithorn, 1988, Zimmerman, 1990 and Smith, 1990). Similarly, lengths of stay for inpatient mental healthcare hospitals and for residential treatment facilities have also increased over the past several years. These changes have also occurred within the military healthcare system.

Within the Army Medical Department (AMEDD), a healthcare system whose main mission is "To Conserve the Fighting Strength" of the active duty soldier, children and adolescent family members of Army beneficiaries, who are eligible for Army-sponsored care and who require inpatient psychiatric hospitalization, are usually directed to civilian mental healthcare facilities because of the paucity of child and adolescent mental health resources within the Army Medical Department. The costs associated with these episodes of care are born by the Civilian Health and Medical Program for the Uniformed Services (CHAMPUS) (Kenkel, 1991).

These same CHAMPUS costs have correspondingly grown along with the increases in utilization and length of stay during each year over the past decade. Even though the Office of the Civilian Health and Medical Program for the Uniformed Services (OCHAMPUS), which is the entity responsible for the administration of this program, has been aware of this upward cost trend and increasing psychiatric inpatient lengths of stay since the early 1980s, it has been unable to stem this upward trend. The reason for this ineffectiveness was that, prior to 1987, the three armed

services were not held accountable for CHAMPUS usage. On a micro-level, individual medical treatment facilities had no incentive to contain the growth of CHAMPUS use, or to manage care. The incentive to control CHAMPUS costs at the armed service level was created in 1987 when Congress mandated that the Army, Navy and Air Force manage their respective portions of the CHAMPUS budget and cover any overruns using funds from their operating budgets. Tri-service interest in CHAMPUS expenditures quickly focused on the annual CHAMPUS budget over-runs. However, the actual authority and responsibility for controlling CHAMPUS use was not given to individual medical facility commanders until 1991 when the United States Army Health Services Command (HSC) delegated this authority under the auspices of the Gateway To Care Program.

A study performed by the General Accounting Office (GAO) in 1990 found that CHAMPUS funding shortfalls were expected to top $2.2 billion in 1990 (GAO/HRD-90-99BR, 1990). The Department of the Army, historically shown to spend a significant portion its budget on war-fighting equipment, rapidly targeted inpatient psychiatric services for cost reductions since these services had historically accounted for almost 50% of the Army's total CHAMPUS budget (Defense Medical Support Center, 1992).

On a micro-level, in 1990, the costs for inpatient child and adolescent psychiatric services within Eisenhower Army Medical Center's health service area comprised approximately 85% of the overall CHAMPUS costs for psychiatric care; child and adolescent inpatient psychiatric costs reached $3.6 million in 1990 (Fuzy, 1991). These costs

also accounted for over 50% of the total CHAMPUS expenditures within this health service area (Hastings, 1991).

## Problem Statement

Mental health clinicians at EAMC have no other option than to refer child and adolescent family members to civilian mental health institutions when inpatient care is required. Associated CHAMPUS costs for these episodes of care have a negative effect on EAMC's operating budget.

## Literature Review

### Trends

An ongoing societal shift towards a more liberal and accepting viewpoint concerning mental illness has resulted in a dramatically increased demand (or a previously unmet need) for psychiatric services (American Medical Association Council on Long Range Planning and Development, 1990; Fox & Gottheimer, 1990 and Hagin, 1989). Pinkert (1991) states that "...(T)he number of young people treated in private psychiatric hospitals has increased 300 percent in 20 years."

These trends have recently hit the AMEDD hard. According to the the Defense Medical Information System (1992), as utilization of mental health services increased so did the corresponding proportion of healthcare dollars spent on them (AMEDD budget dollars). In fact, CHAMPUS mental health expenditures for Army beneficiaries rose from $11.3 million in 1987 to $21.9 million in 1989 (Kenkel, 1991).

In a 1989 article, Larkin wrote that soaring mental health care costs

are forcing businesses to seek managed care alternatives to straight indemnity plans. Similarly, according to Tischler (1990), government, private employers, and insurers have recently been financially forced into sanctioning efforts designed to control costs.

## A Response to These Trends - Managed Care

The most commonly adopted method for controlling healthcare costs has been managing, or coordinating available care (Dill & Rochefort, 1989). Managed care combines economic risk sharing for all parties involved, financial inducements to use managed care services, and strict control of healthcare usage (utilization management) (Coile, 1990).

Economic risk sharing refers to an arrangement made between the insurer, the employer (the government can take the place of either the insurer or the employer, or sometimes both), the member and the physician which outlines in explicit terms the types and degrees of services provided and the corresponding reimbursement. Risk in managed care usually focuses on the unknown variability of the extent of utilization of services by patients. Usually, the insurer or managed care entity gambles against the customers' anticipated healthcare usage, or volume, to negotiate for the least costly healthcare plan/arrangement. If patient volume exceeds what is predicted, the insurer or managed care entity is going to economically suffer. Conversely, if demand is light, the insurer or managed care entity will profit by not having to provide services and/or expending resources.

Insurers and employers may also employ financial controls as part of their managed care plans. Financial controls usually take the forms of defined benefits packages, and increased co-payments and deductibles (Pinkert, 1991). Defined benefits packages are healthcare packages established for an employee by either the employer or insurance handler. These packages contain explicit definitions of what healthcare services will be covered, procedures for accessing healthcare facilities, length of stay caps (both annual and lifetime), etc. Co-pays, short for co-payments, are payments made by the patient for each episode of care which have been explicitly defined by the patient's insurance product. Capitation budgeting is another form of financial control that has recently become popular across the managed care industry.

Many businesses and managed care entities have embraced the concept of capitation funding. Capitation funding involves the prospective payment of a specific dollar amount by an employer or insurer to a healthcare organization based on the number of patients for which it is responsible for providing care to over a specified period, usually a year (McGovern, Lyons, & Pomp, 1990). Healthcare organizations operating under a capitated managed care plan run the risk of experiencing over-utilization. It is definitely in the best interest of such organizations to tightly control patient services and access to avoid incurring excessive, unplanned costs (Astrachan & Astrachan, 1989).

Currently, all AMEDD Gateway To Care Program hospitals are budgeted using a capitation model. In this instance, the population served is defined as those beneficiaries found within each Army hospital's health

service area. According to Army Regulation 40-4, Army Medical Department Facilities and Activities (1 Jan 80), a health service area is defined as a geographical zone surrounding a U.S. Army medical treatment facility. This area is sometimes linked to the medical treatment facility's catchment area, a circle with a 40 mile radius emanating from the respective Army hospital. This method of funds disbursement is a departure from all previous annual budgets, which were predicated upon an financial incentive based system for measuring workload (i.e. increased workload resulted in increased reimbursement).

EAMC is a tertiary referral center supporting a health service region containing approximately 1.8 million beneficiaries. Unfortunately for EAMC, its capitation budget is based on its health service area and not its health service region. This budget fails to account for services provided to patients sent to EAMC by other armed services since there are no intraservice agreements in existence which cover intraservice reimbursement to the treating service's medical facility.

According to Colonel Joseph Thornton, Chief of EAMC's Resource Management Division and Comptroller Consultant to the Surgeon General, the only method of recouping costs for care provided to Amry beneficiaries from outside of the EAMC health service area is to submit a formalized business plan detailing the extent of the services provided to such patients to HSC (personal communication, May 8, 1992). If the business plan is approved, HSC will transfer funds from the CHAMPUS account of the community hospital responsible for that particular beneficiary to EAMC.

The actual number of beneficiaries within the EAMC health service area was identified through the Defense Eligibility Enrollment Reporting Systems (DEERS) to be approximately 55,123 (Hastings, 1991). This population figure was the major element of information used by the U.S. Army Health Services Command to prepare EAMC's capitated budget. Colonel Thornton stated that EAMC's initial planning budget for Fiscal Year (FY) 1992 (October 1, 1991 to September 30, 1992) was $64.4 million. This planning budget was based on the previous year's (FY91) workload minus the Operation Desert Shield/Storm-related workload. The final programmed, capitated-based budget prepared by HSC was based on FY90 (FY91 was not used because of Desert Shield/Storm associated workload) $62.5 million; EAMC was left with a $1.9 million budget deficit (personal communication with Colonel Thornton, February 10, 1992).

Utilization management (UM) is another element of managed care, and is defined by the Eisenhower Army Medical Center Utilization Management Plan (see Appendix A) as a continuous process "designed to identify and solve utilization related problems and permit the institution to make maximum effective use of personnel, monetary and space resources." The first step in utilization management is for the appropriate healthcare provider to triage the patient and determine care requirements. A physician, either associated with the military healthcare system or not, must then ascertain which treatment modality would best benefit the patient (i.e. inpatient hospitalization, outpatient therapy, partial hospitalization, or long-term residential care). If the physician decides that inpatient psychiatric hospitalization is appropriate for child and adolescent family members, a

referral is made to local civilian institution and the patient is transported to this nearby facility.

The civilian facility then contacts Health Management Strategies International, Inc. (HMS). This company is the contractor responsible for CHAMPUS mental health utilization review. Appendix B contains a letter from HMS to civilian mental healthcare organizations which explains the steps to be taken prior to an admission and, later, to be taken for an extension of the preauthorized length of stay.

The process of preauthorization, commonly known as "precertification", involves the healthcare organization contacting HMS, delineating the scope of the patient's problems, and requesting permission to hospitalize this patient (Civilian Health and Medical Program for the Uniformed Services, 1990). Normally, HMS will authorize treatment only after a psychiatric evaluation has been completed, and for a limited time period, such as seven days. At the end of this period, the healthcare organization must again contact HMS, provide them with a patient update, and request additional hospital time (this is a form of concurrent review). Hospitalization without preauthorization can result in HMS denying all claims submitted for care provided (Civilian Health and Medical Program for the Uniformed Services, 1990). According to Major Jim Fuzy, Chief of EAMC's Coordinated Care Branch, HMS reduced nation-wide admissions by five percent in 1991 (personal communication, May 14, 1992).

One example of the effectiveness of utilization management is the CHAMPUS Reform Initiative (CRI). Contrary to the upward CHAMPUS expenditure trend previously mentioned, managed mental health care

programs (also known as CHAMPUS Reform Initiatives (CRI)) in Hawaii and California "managed" to decrease expenditures from $15.9 million in 1987 to $13.2 million in 1989. These same managed care efforts resulted in a patient length of stay nine days shorter than that found in non-managed mental healthcare settings (Kenkel, 1991).

At Fort Bragg, North Carolina, the AMEDD has consigned its child/adolescent psychiatric patients to the care of the North Carolina Department of Human Resources. This venture was designed to contain costs while providing medically appropriate care. This project, entitled the Fort Bragg Child/Adolescent Mental Health Demonstration Project commenced in August of 1989, but became clinically active on 1 June 1990. The main goal of this demonstration project was to match care and services to individual patients. Its underlying goal was to reduce psychiatric care expenditures by avoiding unconditional psychiatric admissions to hospitals or residential treatment facilities.

This program uses treatment modalities not traditionally used by many child psychiatrists (Binger, 1988). It attempts to treat patients using the "continuum of care" concept. According to Dore, Wilkinson and Sonis (1992), this concept refers to "a linear progression" of care with regard to intensity (i.e. public education, outpatient therapy, home-based care, day care, partial hospitalization, residential treatment, full hospitalization). Upon entry into the mental health care system, patients are triaged and directed into the most clinically appropriate health care environment. According to LTC Dennis Dohanos, Project Officer, initial observations by different Army personnel involved in this program indicate that this

program is providing only that care which has been determined to be medically appropriate and provided in the proper setting (along the continuum) (personal communications, May through June, 1991).

This program has also raised the mean mental health per capita cost in the Fort Bragg catchment area from approximately $9.57 to approximately $17.80 (Optenberg, 1991). This tremendous leap in expenditures was mainly due to a successful advertising campaign by the North Carolina Department of Human Resources. Projected enrollment in this program, which was based on previous' years mental health care claims data, only accounted for one-third of those patients seen during the very first month of its operation. Even though patients were receiving care in tailored settings (a supposed cost reducer); overall care costs were far greater than those incurred prior to this program's implementation.

Eisenhower Army Medical Center

The most visible aspect of EAMC's UM program is its Mental Health Utilization Review (UR) Nurse. This individual, who has a psychiatric-nursing background, was hired in July, 1991 and is responsible for closely monitoring the care provided to all child and adolescent EAMC beneficiaries hospitalized in civilian psychiatric facilities. This UR Nurse contacts each mental health facility, within the EAMC health service area, containing Eisenhower beneficiaries on a routine basis (usually weekly if not more frequently) and discusses each patient's progress and treatment plan with the appropriate healthcare provider. She also discusses treatment alternatives and assists in discharge planning (Hastings, 1991;

Fuzy, 1991). These actions are commonly known as the process of concurrent review. Besides concurrent review, many employers, both in the civilian sector and in the military, are continually looking for ways to achieve healthcare cost reductions.

Organizations using coordinated care strategies have been quick to adopt aggressive partial hospitalization programs or outpatient-centered treatment programs because of the lessened cost associated with outpatient care, and because many studies have indicated that in a majority of cases outpatient care is as effective as inpatient care with regard to positive outcomes (Van Meter & Rioux, 1990; Larkin, 1989; Mechanic, 1989; and, Piha, 1988). For example, in 1987, Blue Cross-Blue Shield, in Massachusetts, permitted "the conversion of inpatient mental health benefits to outpatient mental health benefits" for short periods (three- to six-months) with certain employers, and with an expenditure ceiling of $30,000 to $40,000 per year per patient (White & Shields, 1991). This was a drastic shift from its previous willingness to only fund a maximum of $500 per year for outpatient psychiatric care. White and Shields also mentioned one case in which Blue Cross-Blue Shield saved itself almost $80,000 in just one year on just one patient due to the shifting of care to an outpatient environment.

Another method for reducing costs is to shift care from a psychiatrist to a less expensive professional, such as a psychologist, counselor or social worker. However, a study by Dorken (1989) on CHAMPUS mental health admissions and continuity of care revealed that many psychologists must relinquish their patients to psychiatrists upon

admission. Many hospitals only permit physicians to admit; psychologists are thereby forced to refer their patients to psychiatrists. This factor is important since inpatient psychiatry has accounted for upwards of 70% of the total amount spent on psychiatric services nation-wide (Dorken, 1989).

Additionally, as part of the previously mentioned effort to control psychiatric costs, in 1987 Massachusetts Blue Shield extended its coverage of mental health service providers to include licensed clinical social workers. This effort was directed at shifting patients away from high cost psychiatrists and psychologists to clinically acceptable, but lower priced mental health professionals. According to Fairbank (1989), this action reduced the market share of traditional mental health providers by 10% in 1987.

Systemic Problems

In the areas of child and adolescent psychiatry, the needs of many children and adolescents have gone unmet due to shortages in available care (Grant, Offord and Blum, 1989). Recently, new for-profit organizations have sprung up to fill this health care coverage gap. Many of these mental healthcare organizations have begun aggressive advertising campaigns to attract new patients especially in market areas containing large military populations (Taube and Goldman, 1989). It is important to note that health services paid for by CHAMPUS are far more expensive than similar care provided by military providers, and more generous than coverage provided by other forms of health insurance (Callahan, 1991 & GAO/HRD-90-68, 1990; personal commmmunication with MAJ James

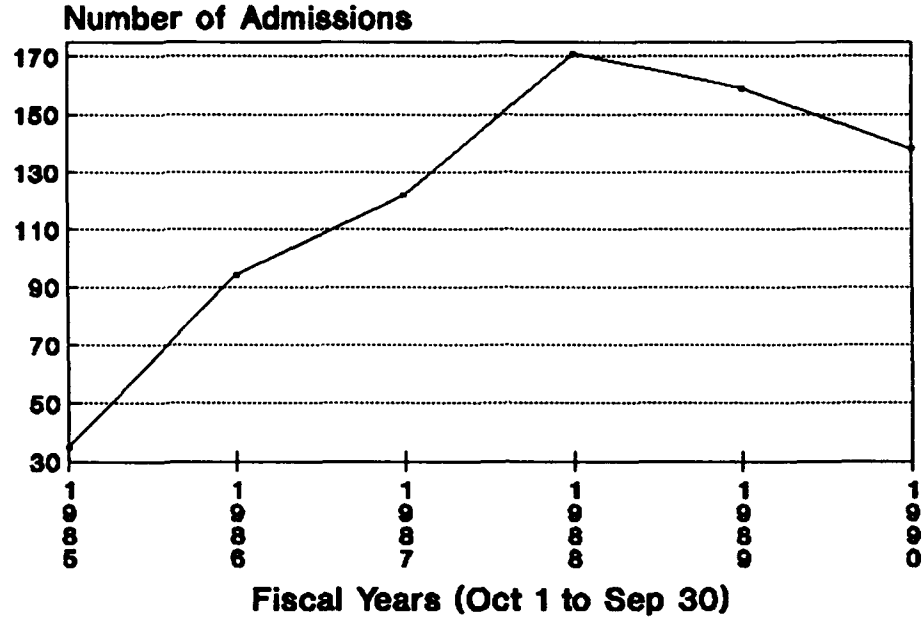
Fuzy, May 25, 1992).

The Army first responded to this shortage of child psychiatrists and services in 1983 when Lieutenant General Mittemeyer, who was the Surgeon General of the Army at that time, developed a plan to offset this care gap. Unfortunately, changing force structure requirements lessened the effectiveness of LTG Mittemeyer's plan for the broad-base dispersal of qualified child psychiatrists throughout Army Medical Department (AMEDD) activities. Currently, the Medical Corps contains approximately "160 active-duty, board eligible or board certified child psychiatrists" (Cozza & Hales, 1991).

In a large number of locations, CHAMPUS eligible beneficiaries have been forced to use the CHAMPUS insurance system to acquire child/adolescent psychiatric services due to the relatively few and widely dispersed Army child psychiatrists (Srabstein, 1983).

Figure 1 contains historical inpatient psychiatric admission information for EAMC. These numbers reflect the rise in utilization from FY85 through FY88. After FY88, the number of admissions decreased slightly. Specific data regarding of child and adolescent psychiatric admissions were not available for fiscal years prior to FY90.

Figure 1. Number of Gross Psychiatric Admissions from FY85 to FY90.




The Structure of an Inpatient Unit

According to Dr. Joseph Woolston, MD (1991), "the model...child and adolescent psychiatric inpatient service of the early 1990s is a small (10 to 20 bed), short to intermediate stay (1 to 4 months) evaluation and treatment facility". Inpatient facilities usually divide their patient population into subgroups based on age and psychosocial development (Woolston, 1991; Manoleas, 1991; and Dalton, Bolding, Woods & Daruna, 1987). For example, Charter Hospital of Augusta has divided itself into three main program areas: a) child (ages 3 to 11 years); b) early

adolescent (ages 11 to 14 years); and, c) adolescent (14 to 18 years).

The ages in these program areas overlap because some children may fit into another program based on their maturity level and not their age. Similarly, Woolston (1991) also defines three developmental stages (i.e. under 3 years, 4 to 14 years, and 15 to 19 years) which are commonly used in child and adolescent inpatient programs.

Most short- to intermediate-term child and adolescent inpatient programs focus on providing the patient with constant, explicit feedback concerning behavior through group and individual therapy. School work also plays an important role in these programs since most patients are within their primary or secondary school years. The final component of care provided in most programs is family therapy.

Children and adolescents treated as inpatients usually come from maladaptive, dysfunctional families. Family therapy strives to provide all family members with a clear understanding of what caused the hospitalization, how behaviors can be changed to more effectively deal with situations, and what needs to be done in the future to avoid repeat hospitalizations (Dalton, Bolding, Woods & Daruna, 1987).

In terms of staffing, child or adolescent psychiatry inpatient units usually include: child psychiatrists, pediatricians, psychologists, social workers, nurses and educational specialists (Manoleas, 1991). Doherty, Manderson and Carter-Ake (1987) also described core staffing for one specific eight bed child unit as being comprised of "a child psychiatrist-director, a nursing coordinator, 16 full-time nursing and child milieu staff, a social worker-family therapist, an expressive arts therapist and a child

development specialist-educator".

Both Mr. Philip Feisal, Administrator of Charter Hospital of Augusta, Georgia and Mr. Darrell Moon, Administrator of Aurora Pavilion, Aiken, South Carolina, staff their psychiatric facilities with these same types of personnel, though on different scales because of the differences in unit sizes (personal communications, March, 1992 and November, 1991 respectively).

Dr. Ruck, Chief of the Child and Adolescent Psychiatry Service at EAMC, stated during a personal interview that "...if such units were created at EAMC, core staff for each unit should consist of: a child psychiatrist-director; a head nurse; a noncommissioned officer-in-charge (NCOIC); one child/adolescent psychiatric nurse (per shift); several paraprofessionals (i.e. enlisted/civilian licensed practical nurses; enlisted/civilian psychiatric specialists - per shift); a unit clerk; an administrative assistant; a social worker; several corpsmen; and, an educational specialist..." (personal communication, March 13, 1992). Additionally, Dr. Ruck also stated that "a single psychologist with a specialization in psychological testing and measurement should be employed to support both units."

## Managed Care and the Military

Recently, the Assistant Secretary of Defense (Health Affairs), Dr. Enrique Mendez, told Congress that it is in the best interest of the DOD to devote its healthcare dollars to managed care through its coordinated care program (Mendez, 1992). Coordinated care in the Army is called "Gateway To Care". The entire coordinated care effort is devoted to

empowering medical facility commanders with the authority and responsibility for controlling all healthcare-related costs within their health service area while maintaining optimal access to high quality care for authorized beneficiaries.

## Purpose

The purpose of this study is to determine if it is cost-effective to create a child and adolescent psychiatric ward on the seventh floor of Eisenhower Army Medical Center.

## Methods and Procedures

### Existing Conditions

According to the Standing Operating Procedure governing EAMC's Department of Psychiatry and Neurology, "full outpatient diagnostic and treatment services are available for children, adolescents and their families..." (Logan, March 27, 1991). Outpatient care is provided by two full-time child psychiatrists. Eisenhower Army Medical Center also maintains two child/adolescent psychiatry fellowships each year. These fellows provide outpatient services at EAMC and inpatient services at the Medical College of Georgia (MCG), Augusta, Georgia.

Eisenhower currently operates a two-ward psychiatric unit on its 13th floor, which can house up to 66 adults (Logan, 1991). However, this unit does not normally accept patients under the age of 18 for other than crisis intervention hospitalization (exceptions are made for those minors who are "emancipated", or minors functioning as adults). This ward area

was physically designed to operate as a medical-surgical ward, and is extremely similar to all the other wards at EAMC. This floor does not even have a lock-down capability at present and patients can travel freely throughout this floor.

Children and adolescents requiring inpatient care are referred to nearby civilian institutions, as EAMC has no inpatient child/adolescent psychiatric unit. Charter Hospital of Augusta has traditionally received a majority of patient referrals for inpatient child and adolescent care services from EAMC. In 1990, Charter received 122 out of a total of 144 children and adolescents referred out by EAMC. According to Fuzy (1991), child and adolescent psychiatric referrals from Eisenhower have historically provided Charter Hospital of Augusta, Georgia, with over 50% of its business.

One-half of the seventh floor of the main building (Building 300) was identified by EAMC staff as the most likely location for these child and adolescent psychiatric units. This area would then be further subdivided into separate child and adolescent units because a number of studies performed over the past three decades have consistently determined that children and adolescents recover best when treated in facilities which are separate from adult inpatient units, and separated into like age groups (Gossett, Lewis & Barnhart, 1983; Garber, 1972; Levy, 1969; and Beavers and Blumberg, 1968). The decision to use the seventh floor for these two units was predicated upon the present occupant, the Department of Family Practice, relocating to its new clinic building which is currently under construction, and is expected to be ready for occupancy in March, 1993.

## Study Design

Cost-effectiveness analysis is a process in which cost data and effectiveness data for various alternatives are measured and compared to determine which alternative is most appropriate for an organization (Hillman, 1992). Such cost comparisons are commonly performed by managers to facilitate decision-making when concerned with the acquisition or development of new products, equipment or services. According to the Emergency Care Research Institute (1984), the key component within any cost comparison is the determination of "relevant costs".

Relevant costs are those fixed or variable costs which are not readily comparable between alternative services or products. Non-relevant costs are easily comparable, and can be discounted since they cancel each other out. Relevant costs are important because they can account for extrinsic factors which can sway outcomes of cost comparisons.

In this study, both the relevant and the directly comparable costs associated with re-equipping, hiring new staff and renovating/modifying a portion of an inpatient ward located in EAMC will be compared with the annual CHAMPUS costs associated with child/adolescent inpatient care provided by Charter Hospital of Augusta to determine which option is least expensive to Eisenhower Army Medical Center. Charter Hospital was specifically targeted because it currently provides the bulk of the inpatient child/adolescent psychiatric services provided to EAMC beneficiaries (Fuzy, 1991).

On October 8, 1991, Health Services Command released a memorandum outlining the format for Gateway To Care business plans

(Jones, 1991). In April, 1992, Health Services Command released further guidance on Gateway To Care (see Appendix D). The concept behind this business plan memorandum was to provide subordinate units with a standard method for portraying and arranging business data to facilitate making business decisions.

## Data Collection

Healthcare-related cost, utilization and population data was retrieved from the Defense Medical Information System of the Office of the Assistant Secretary of Defense (Health Affairs), from OCHAMPUS, and from information supplied by Charter Hospital of Augusta, Georgia. The DMIS database system uses resource and workload data garnered from all DOD healthcare facilities and from OCHAMPUS. Beneficiary data is supplied to this system from the Defense Eligibility Enrollment Reporting System.

Beneficiary population projections were taken from the Resource Analysis and Planning System (RAPS) module of DMIS. The numbers generated by this system were then adjusted upward to reflect the March, 1992, addition of the 63rd Signal Battalion to Fort Gordon.

Staffing costs were based on the proposed core staff; a listing of proposed staff may be found in Appendix E. Salary computations were derived from the Federal Personnel Manual (1991) as supplied by Mr. Brown from the Fort Gordon Civilian Personnel Office (personal communication, March 24, 1992). According to this manual, a factor of 0.208 is used to compute the added expenses (i.e. insurance benefits,

vacation days, sick days, etc.) associated with hiring a full-time employee. Physician salary baselines were taken from the General Schedule under which physicians fall (personal communication with Ms. Brown, Staffing Services Office, April 27, 1992). Military personnel costs were computed by adding the Basic Allowance for Quarters (with Dependents) and the Basic Allowance for Subsistence to the appropriate salary.

Equipment-related cost data was derived from catalogs issued by assorted General Services Administration contract vendors, and from the catalogs of local and national school/office-products retailers. Appendix F contains a list of items needed to open a 25 bed child/adolescent program. These items were identified through conversations with assorted staff members at EAMC and Charter Hospital of Augusta. Similar equipment items, in varying quantities were seen by the author at Humana Hospital of Augusta, Georgia (in its Dual Diagnosis Adolescent Unit) and at the Aurora Pavilion, in Aiken, South Carolina.

Renovation costs were estimated using a 1987 construction cost data reference (Mahoney, 1986) provided by the Fort Gordon Directorate of Installation Support (DIS). DIS uses this guide to develop cost estimates for all of its construction projects. The author used this book to develop a construction cost estimate for the renovations required to bring the seventh floor to a point of comparability with facilities in the surrounding communities (based on Charter Hospital of Augusta, Georgia; Humana Hospital of Augusta, Georgia; and Aurora Pavilion of Aiken, South Carolina).

Total construction costs were based on materials, labor and overhead necessary to complete a specific job (e.g. preparing and painting surfaces [per square foot], installing carpeting and underlayment [per square yard], etc.), and a 5% add-on to cover the costs of inflation during the period since this manual was published. The 5% add-on was based on guidance provided by construction estimators from the Fort Gordon Directorate of Industrial Services; material costs had increased, but labor costs and overhead costs had actually decreased. The specific construction cost estimate can be found in Appendix G. Appendices H and I contain a single-line drawing of the seventh floor at EAMC (derived from EAMC "as-built" architectural drawings), and the basic structure of the proposed child and adolescent units, after the renovations occur, respectively.

## Results

Table 1 contains the inpatient psychiatric CHAMPUS cost data, which was extracted from the Resource Analysis and Planning System module of the Defense Medical Information System, for all age groups in the Eisenhower Army Medical Center health services area.

Table 1.

Defense Medical Information System Data on CHAMPUS Psychiatric Expenditures for FY85-FY90.

| | Fiscal Years | | | | | |
|---|---|---|---|---|---|---|
| | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 |
| Psychiatric Admissions | 35 | 94 | 122 | 171 | 159 | 138 |
| Psychiatric Bed Days | 1,680 | 2,857 | 3,868 | 5,614 | 7,716 | 8,509 |
| Expenditures | $209,799 | $456,585 | $1,082,602 | $1,802,301 | $3,286,580 | $3,384,112 |

The data in Table 1 does appear to differ slightly from the data maintained at EAMC, but only in terms of a few additional admissions (i.e. DMIS says "138 admissions for 1990"; EAMC says "144 admissions for 1990"). The difference between the sets of numbers is small and could stem from lag times in the processing of untimely-filed CHAMPUS claims (there is up to a two year window in which to file claims). Table 2 depicts child and adolescent inpatient psychiatric admissions for FY90. As previously stated, Charter Hospital had the most admissions, followed by Georgia Regional Hospital of Augusta (GRHA). GRHA is a state owned and operated mental health facility known for its residential care.

Table 2.

Child/Adolescent Inpatient Psychiatric Admissions in FY90

| Hospital | Number of Admissions |
|---|---|
| Charter Hospital of Augusta | 122 |
| Georgia Regional Hospital of Augusta | 12 |
| Medical College of Georgia | 4 |
| Other | 6 |
| Total: | 144 |

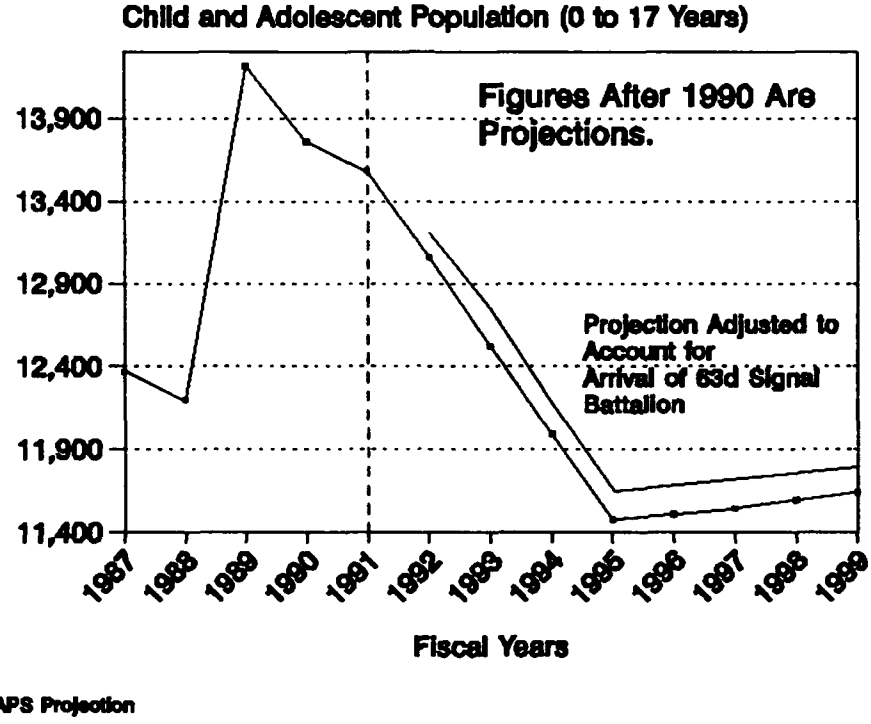
Note 1: Total Cost for an Average Admission: $25,000.00 (All Facilities)

Note 2: Total Cost for Child & Adolescent Inpatient Psychiatric Admissions: $3,600,000.00 = ($25,000 x 144)

Note 3: Data adapted from the EAMC Gateway To Care Plan.

Figure 2 depicts the child and adolescent population (ages 0 to 17 years only - the RAPS module included 18 year olds into an older age group because they can be hospitalized in adolescent or adult patient care areas) who are eligible for care through the AMEDD or through CHAMPUS. The child and adolescent population is slowly decreasing. This decline should eventually level off slightly below the 12,000 mark in the late 1990s as the Army's down-sizing is completed. However, the addition of new, permanent-party units to Fort Gordon could increase this population.

Figure 2. Actual and Projected CHAMPUS Population Aged 0 to 17 Years.

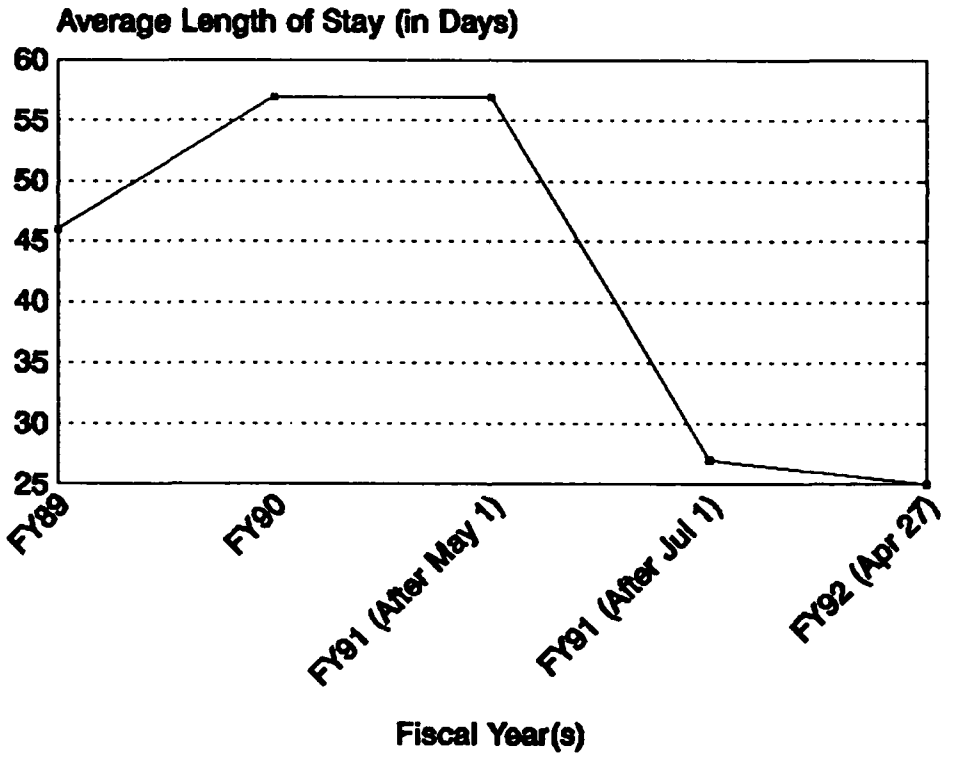



Once the population of children and adolescents eligible for mental health care provided or paid for by EAMC has been identified and quantified, other factors, such as average length of stay and average cost per stay, have to be defined to support the cost-effectiveness analysis.

As can be seen in Figure 3, the average LOS at Charter Hospital has decreased dramatically from FY90 (57 days) to FY92 (25 days). The time periods in FY91, as reported in Fig. 3 and Fig. 4, refer to critical events: 1) HMS activated its UM practices starting on May 1, 1991; and,

2) EAMC hired its mental health UR nurse on July 1, 1991. On April 27, 1992, the author spoke with representatives of Wisconsin Physician Services (WPS), the present CHAMPUS fiscal intermediary, and was given the average LOS (i.e. 25 days), at Charter Hospital of Augusta, for child and adolescent family members of Army service members, retirees, and survivors in the EAMC health service area.

Figure 3. Changes in Length of Stay at Charter Hospital of Augusta.



As the average length of stay at Charter Hospital decreased, the total costs associated with each stay decreased. Figure 4 depicts the downward trend in the average cost per stay.

Figure 4. Average Cost per Stay At Charter Hospital.

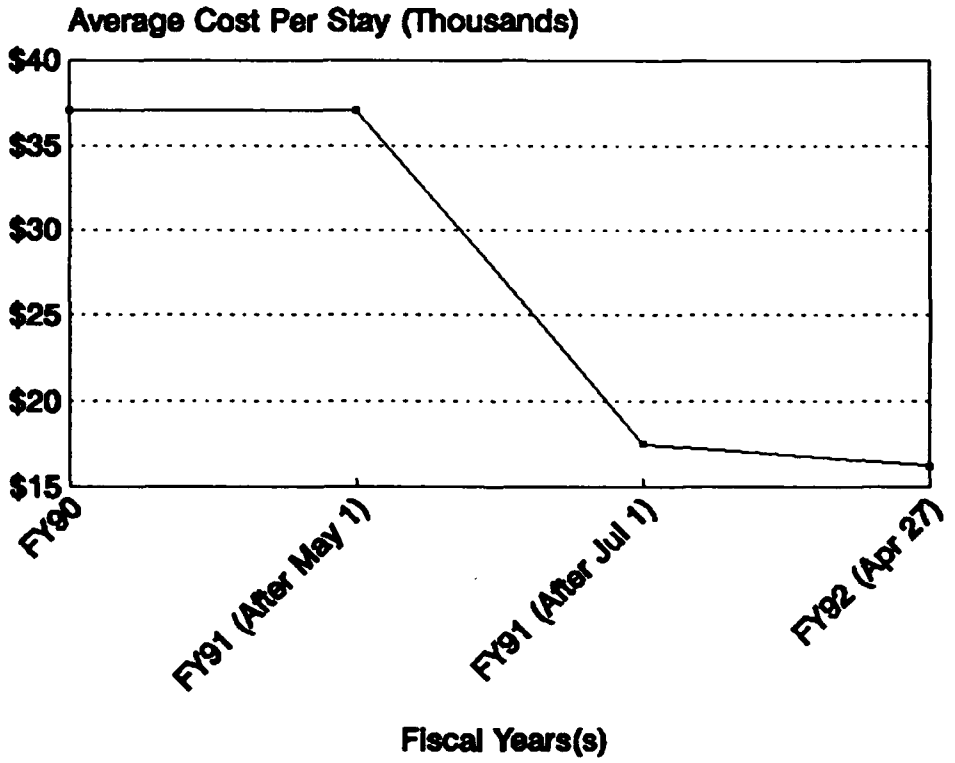



Table 3 contains a projection of the costs, in FY92 dollars, associated with creating (i.e. renovating, equipping and staffing) and

operating (i.e. recurring staff and supply costs) inpatient child and adolescent psychiatric units on the seventh floor of EAMC computed up to Fiscal Year 1995. Specifically, each item of expense (i.e. personnel, equipment and construction/renovation) was derived from the cost data located in appendices E, F and G.

Table 3.

Combined Cost Projection.

| ITEMS OF EXPENSE | FY92 | FY93 | FY94 |
|---|---|---|---|
| 1. Personnel. | | | |
| a. Military | $ 290,860.00 | $ 299,585.80 | $ 308,573.37 |
| b. Civilian | $1,109,770.38 | $1,143,063.50 | $1,177,355.41 |
| c. TOTAL | $1,400,630.38 | $1,442,649.30 | $1,485,928.78 |
| 2. Equipment. | | | |
| a. One-Time | $ 96,800.00 | $ 0.00 | $ 0.00 |
| b. Recurring | $ 8,000.00 | $ 8,000.00 | $ 8,000.00 |
| c. TOTAL | $ 104,800.00 | $ 8,000.00 | $ 8,000.00 |
| 3. Renovations. | $ 242,056.04 | $ 0.00 | $ 0.00 |
| COST TOTALS: | $1,747,486.42 | $1,450,649.30 | $1,493,928.78 |

Personnel costs for out years in Table 3 were based on an average 3% increase in salary and benefits to offset inflation. The annual inflation factor was randomly chosen by the author because he felt that the straight-

line cost projections currently in use by elements of the Resource Management Division at EAMC (personal communication, April, 1992). The figure of 3% was chosen because it approximates the average annual cost of living increase provided by Congress to Civil Service employees.

Recurring costs are those cost associated with conducting business on a daily basis (i.e for administrative supplies, for printing, for special testing instruments). The costs associated with renovating were based on modifying a medical-surgical floor to accept children and adolescent psychiatric patients.

In February, 1992, EAMC and Charter Hospital of Augusta entered into an arrangement through which children and adolescents could spend minimal periods as inpatients and then be transferred into Charter's partial hospitalization program (also known as "day hospitalization") .

Currently, children and adolescents participating in this program spend a reduced period of time as inpatients (approximately 10 days) combined with a follow-on period of an additional 20 to 30 days as outpatients who spend the day at Charter Hospital (thus the term of "partial hospitalization"). The partial hospitalization rate is substantially less than the inpatient rate (i.e. $250 versus $650 per day). Tables 4 and 5 provide comparison information on each of the care alternatives available at Charter Hospital for the treatment of child and adolescent psychiatric patients. The partial hospitalization figures in Table 4 assume a 100% participation rate in this program. Figure 5 depicts psychiatric care alternatives, and allows for a partial hospitalization program participation rate of 75% and 100% for both 20 and 30 day periods of partial hospitalization care. The 20 and 30 day periods were selected based on length of stay information supplied by Charter Hospital (personal communication with Mr. Feisal, Charter Hospital of Augusta, March,

1992). The figures of five and ten days for initial inpatient stabilization and critical therapy were held constant for the sake of comparison. The five day length of stay represents a possible future length of stay after the effects of different initial lengths of stay for partial hospitalization programs have been better evaluated.

Table 4.

Comparing Alternatives.

| Type/Location | Inpatient Length of Stay | Partial Hospitalization Length of Stay | Average Cost Per Stay |
|---|---|---|---|
| 1. Traditional Inpatient | 25 | 0 | $16,250.00 |
| 2. Partial (with 30 days partial) | 10 | 30 | $14,000.00 |
| 3. Partial (with 20 days partial) | 10 | 20 | $11,400.00 |
| 4. Partial (with 30 days partial) | 5 | 30 | $10,750.00 |
| 5. Partial (with 20 days partial) | 5 | 20 | $ 8,250.00 |

Cost projections in Figure 5 were based on FY90 utilization rates (122 patients per year) and the average length of stay (25 days) as of April 27, 1992, for psychiatric child and adolescent inpatients at Charter Hospital. The cost differences of each of the alternatives (i.e. status quo and partial hospitalization variations) were compared to the projected cost of an in-house child and adolescent ward at EAMC and were graphed in Figure 6.

Figure 5. Projected Cost of Care Alternatives.

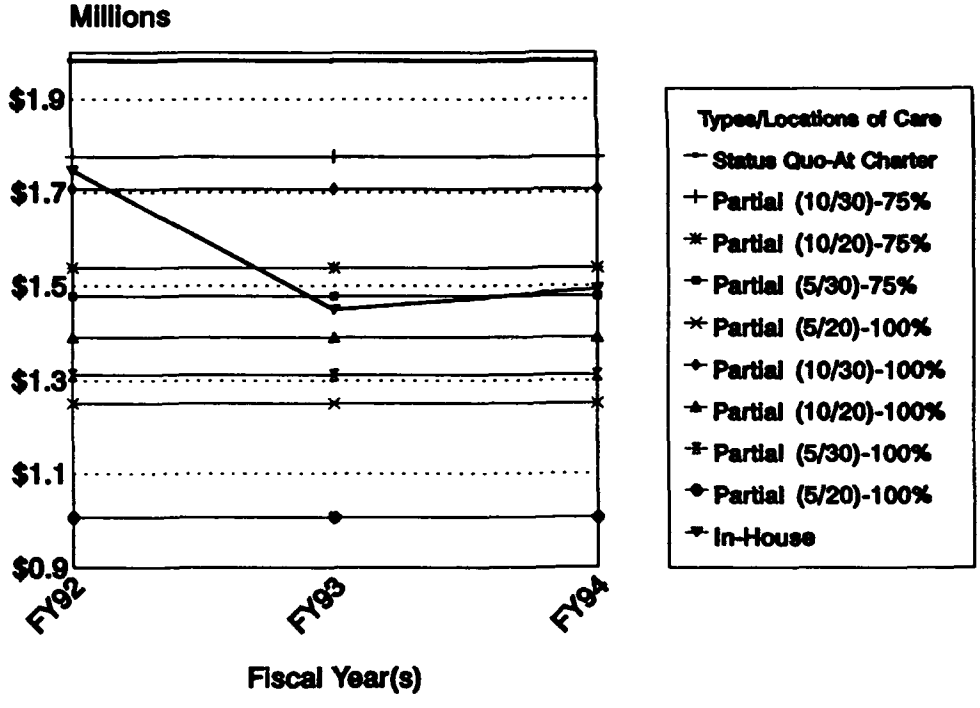


Figure 6. Costs Avoided or Incurred.

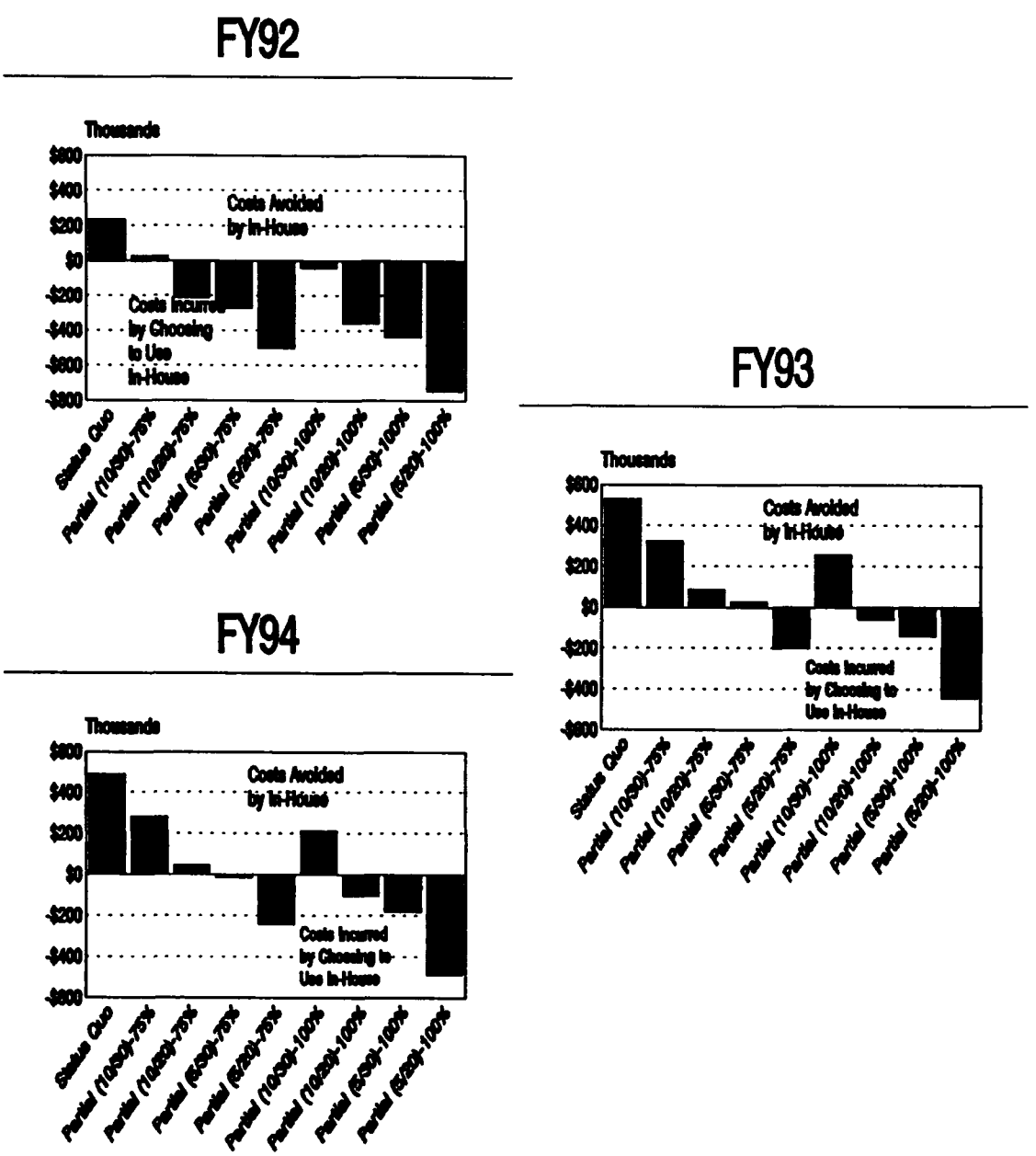



Figure 6 is broken down into three separate fiscal years to facilitate comprehension. The initial year contains the

tremendous overhead associated with starting-up an inpatient child and adolescent psychiatric ward where none currently exists. Cost avoidance is either unobtainable or is minimal for practically all options during the first year. Actual break-even for initial investment costs could be obtained during the first year if the status quo treatment cost is used as a baseline for comparison. Follow-on years guarantee a CHAMPUS cost avoidance to some degree.

## Discussion

Based strictly on the cost avoidance data in Figure 6, it would be cost-effective for EAMC to implement a project to create and maintain inpatient child and adolescent psychiatric units to facilitate the recapture of CHAMPUS dollars. However, other mitigating factors should be considered before investing almost $2 million in this venture. It is important to note changing trends in service usage.

The average inpatient length of stay for both adult and child/adolescent psychiatric patients was 46 days in FY89 and 57 days in FY90. However, the average length of stay in FY91 dropped to 27 days (see Figure 3). According to Wisconsin Physician Services, the average LOS for EAMC children and adolescents hospitalized at Charter Hospital of Augusta has further decreased to 25 days, and can be expected to continue to decrease slightly (personal communication, April 27, 1992).

This tremendous drop in length of stay was unanticipated by the staff at Eisenhower Army Medical Center. In fact, the EAMC Gateway to Care Implementation Plan projected 47 days for FY91, 37 days for FY92 and 30 days for FY93 (Hastings, 1991). This dramatic 30 day reduction in length of stay over a one year period also resulted in a major decrease in the overall costs associated with inpatient psychiatric (see Figure 4).

EAMC staff members have attributed this drop to: the overall effectiveness of the EAMC UM program; to changes in CHAMPUS LOS ceilings (i.e. from 60 days to 45 days); to the advent of HMS preauthorization requirements; and to the specific concurrent review skills and case management abilities of the EAMC UR Nurse.

These downward trends in use and cost (due to decreases in LOSs) are similar to those found throughout the country. It appears as if the rate of decrease in average LOS has slowed down drastically, if it has not already reached a plateau.

Indeed, it is conceivable that the average length of stay will level-off at this point. Further reductions in length of stay without some sort of additional treatment could lead to re-hospitalization. The partial hospitalization program at Charter Hospital could fill this treatment void. An even larger cost savings would be gained if the number of initial partial hospitalization inpatient days were decreased even further. There

is a potential through the process of utilization management for this to occur.

Besides changes in actual CHAMPUS expenditures, space shortages must also be considered when contemplating placing a child and adolescent psychiatric ward on EAMC's seventh floor. Eisenhower Army Medical Center has been afflicted with a space shortage since its very opening day which has resulted in selected administrative and clinical work centers, such as the Resource Management Division, Social Work Service, Clinical Psychology Service, and the Child and Adolescent Psychiatric Service, being relocated outside of the main campus. Another factor to be considered is the attitude of mental health providers towards managed mental health care, since this project would stem from the Army's Gateway To Care Program - a managed care program.

Managed care often appears to dictate practice pattern changes through the mechanisms of utilization management and financial controls. This rankles many elements of the mental healthcare profession. Certain healthcare professionals, especially psychiatrists, have stated that managed mental healthcare is a detriment to patient care (Tischler, 1990; Sharfstein, 1990; Sharfstein, Dunn, Kent & Flannigan, 1989; Gray & Field, 1989).

One drawback of managed mental health care's shorter lengths of stay is a resultant decrease in provider contact time with the patient. This hinders long-term therapy and forces the provider to try to imbue the patient with just the defensive skills necessary to alleviate the problems which initially caused the hospitalization (Dalton, Bolding, Woods, Daruna, 1987; Dilandro, Kendrick, & Seitz, 1991).

It is also important to note that the RAPS calculations are founded on a baseline year which is two years old (due to CHAMPUS claims submission deadlines). This prevents,or hinders, database modifications to reflect changes in policy, realignments of units or base closures. This data is only as good as that information which each medical treatment facility entered into the system.

The decreasing end strength of the Army is another factor worthy of consideration since the number of those eligible for care will eventually decrease, as will the corresponding number of inpatient child and adolescent psychiatric admissions. However, this overall reduction in costs may not be realized until the upheaval associated with Army down-sizing settles down.

According to a recent personnel update briefing (14 Jan 92) provided by Lieutenant Colonel Richard Lyday, Troop Commander at Eisenhower Army Medical Center, the Army will reduce its end strength from its current 750,000 (approximate) to 500,000 (approximate) by the close of September 30, 1995. A potentially large number of those soldiers and their families who have been involuntarily separated would be eligible for extended health care benefits. Those persons eligible for continued military medical benefits after separation from service have the potential to place an additional unresourced burden upon the Army Medical Department. This phenomenon is supported by research by Liem & Liem (1979, December), which indicated that unemployment of the head of the household can result in a particularly strained and stressful home environment. The combination of large numbers of newly unemployed

service members (and their family members) with continued, albeit temporary, medical care benefits and an under-resourced AMEDD could promulgate increased psychiatric admissions for children and adolescents.

## Conclusions and Recommendations

This research has not explicitly demonstrated that it would be cost-effective to create an inpatient child and adolescent psychiatric ward on the seventh floor of Eisenhower Army Medical Center. The influencing factors described in the Discussion portion of this work could easily help such a ward to become a resource funnel, draining staff and money, and actually incurring larger costs than are currently being spent on CHAMPUS.

The author recommends that EAMC leadership continue to pursue joint ventures with local child and adolescent mental health care facilities. Specical emphasis on cost avoiding programs, like partial hospitalization, should be pursued. These liaisons would benefit both parties and lead to a CHAMPUS cost avoidance and would offset the positive points associated with EAMC's potential in-house program. The uncertainty associated with ongoing congressional legislative efforts and the present lack of a defined benefits package for the Gateway To Care Program do not support a commitment by EAMC's leadership of large amounts of resources into a child and adolescent psychiatric program.

**References**

American Medical Association Council on Long Range Planning and Development. (1990, November 21). The future of psychiatry. Journal of the American Medical Association, 264(19), 2542-2548.

American Psychological Association. (1983). Publication Manual of the American Psychological Association (3rd ed.). Washington, DC: Author.

Astrachan, B. & Astrachan, J. (1989, September). Economics of practice and inpatient care. General Hospital Psychiatry, 11(5), 313-319.

Barker, P. (1988). Basic Child Psychiatry (5th ed.). Boston, MA: Blackwell Scientific.

Beavers, W. Blumberg, S. (1968). A follow-up study of adolescents treated in an inpatient setting. Diseases of the Nervous System, 29( ), 606-612.

Binger, C. (1988). Child & adolescent psychiatry. In H. H. Goldman (Ed.), Review of General Psychiatry (2nd ed.) (pp. 633-639). Norwalk, CN: Appleton & Lange.

Blinder, B., Young, W., Fineman, K., & Miller, S. (1978). The children's psychiatric hospital unit in the community: Concept and Development. 848-850.

Boland, P. (1991). Making Managed Healthcare Work: A Practical Guide to Strategies and Solutions (p.276). New York: McGraw-Hill.

Callahan, C. (1991, April). Health care for the children of Army service members: Cost of alternatives. Military medicine, 156, 186-9.

Civilian Health and Medical Program of the Uniformed Services Fiscal Year 1992 Updates. (1991, October 30). Federal Register, 56(210), 55909. Washington, D.C.: Government Printing Office.

Civilian Health and Medical Program of the Uniformed Services (CHAMPUS), Section 199, 32 C.F.R. Ch.I, (1990, July 1).

Coile, R. (1990). The New Medicine: Reshaping Medical Practiceand Health Care Management (pp.178-9). Rockville, MD: Aspen.

Council on Long Range Planning and Development. (1990, November 21). The future of psychiatry. Journal of the American Medical Association, 264(19), 2542-2548.

Cozza, K. & Hales, R. (1991, April). Psychiatry in the Army: A brief historical perspective and current developments. Hospital and Community Psychiatry, 42(4), 413-418.

Dalton, R., Bolding, D., Woods, J. & Daruna, J. (1987, September). Short-term psychiatric hospitalization of children. Hospital and Community Psychiatry, 38(9), 973-976.

Defense Medical Systems Support Center. (1992). Defense Medical Information System of the Office of the Assistant Secretary of Defense (Health Affairs) [Computer Program]. Falls Church, VA.

Dilonardo, J., Kendrick, K. & Seitz, L. (1991, September). Use of inpatient psychiatric care at a VA medical center after implementation of a prospective payment system. Hospital and Community Psychiatry, 42(9), 939-942.

Dill, A. & Rochefort, D. (1989). Coordination, continuity, and centralized control: A policy perspective on service strategies for the chronic mentally ill. Journal of Social Issues, 45(3), 145-159.

Department of Defense, Office of the Assistant Secretary of Defense (Health Affairs). (1991, July). Civilian Health and Medical Program of the Uniformed Services (CHAMPUS) (4-5 - 4-12, 6-8 - 6-10a).

Dore, M., Wilkinson, A. & Sonis, W. (1992, January). Exploring the relationships between a continuum of care and intrusiveness of childrens' mental health services. Hospital and Community Psychiatry, 43(1), 44-48.

Fairbank, A. (1989, Summer). Expanding insurance coverage to alternative types of psychotherapists: Demand and substitution effects direct reimbursement to social workers. Inquiry, 26(2), 170-181.

Fox, B. & Gottheimer, D. (1990, February). Meeting managed mental health demands. Health Care Strategic Management, 8(2), 15-17.

Fuzy, J. (1991, September 30). Gateway To Care Implementation Plan - Eisenhower Army Medical Center, Fort Gordon, Georgia. Fort Gordon, GA: U.S. Army.

Garber, B. (1972). Follow-up study of hsopitalized adolescents. New York: Brunner/Mazel.

Garety, R. (1989, January). Administrative issues in inpatient child and adolescent psychiatry. Journal of Child and Adolescent Psychiatry. 28(1), 21-25.

General Accounting Office. (1990, May). Health insurance: Cost Increases lead to coverage limitations and cost shifting (GAO/HRD-90-68). Gaithersburg, MD: U.S. General Accounting Office.

General Accounting Office. (1990, March). DoD Health Care: Funding shortfalls in CHAMPUS, Fiscal Years 1985-91 (GAO/HRD-90-99BR). Gaithersburg, MD: U.S. General Accounting Office.

Glazer, W., Kramer, R. Montogomery, J. & Myers, L. (1991, December). Use of medical necessity scales in concurrent review of psychiatric inpatient care. Hospital and Community Psychiatry, 42(12), 1199-1200.

Gray, B. & Field, M. (Eds.). (1989). Controlling costs and changing patient care?. Washington, D.C.: National Academy Press.

Gossett, J., Lewis, J. & Barnhart, D. (1983). To find a way: The outcome of hospital treatment of disturbed adolescents. New York: Brunner/Mazel.

Hagin, D. (1990). Demand for psyhiatric services continues to grow. Health Care Strategic Management, 7(9), 1, 20-22.

Hastings, C. (1991, September 10). Gateway To Care Implementation Plan - Eisenhower Army Medical Center, Fort Gordon, Georgia. Fort Gordon, GA: U.S. Army.

Hillman, A. (1992, February). The critical balance: Quality care versus cost containment. Quality Health Care & Outcomes, 2, 1-8.

Kenkel, P. (1991, June 17). Programs rein in mental healthcare costs. Modern Healthcare, 21(24), 62.

Kenkel, P. (1990, January 29). Utilization review takes toll on mental health units. Modern Healthcare, 20(40), 42.

Kongstvedt, P. (1989). The Managed Health Care Handbook (p. 95). Rockville, MD: Aspen.

Larkin, H. (1989, April 20). Managed mental health care moves inpatients out. Hospitals, 63(8), 64, 66.

Levy, E. (1969). Long-term follow-up of former inpatients at the Children's Hospital of the Menniger Clinic. American Journal of Psychiatry, 125( ), 1633-1639.

Liem, G. & Liem, J. (1979, December). Social support and stress: Some general issues and their application to the problem of unemployment. In L. Ferman & J. Gordus (Eds.) Mental Health and the Economy (pp. 347-377). Kalamazoo, MI: W.E Upjohn Institute for Employment Research.

Logan, W. (1991, March 27). Standard operating procedure: Department of Psychiatry and Neurology. Fort Gordon, GA: Department of Psychiatry and Neurology, Eisenhower Army Medical Center.

Lyday, R. (1992, January 14). Down-sizing in the Army, Briefing presented on 14 January 1992 during Officer's Call, Eisenhower Army Medical Center, Fort Gordon, GA.

Mahoney, W. (1986). Building Construction Cost Data 1987 (45th ed.). Kingston, MA: Construction Consultants and Publishers.

Manoleas, P. (1991, March). Designing mental health facilities: An interactive process. Hospital and Community Psychiatry, 42(3), 305-308.

McGovern, M., Lyons, J., & Pomp, H. (1990, April). Capitation payment systems and public mental health care: Implications for psychotherapy with the seriously mentally ill. American Journal of Orthopsychiatry, 60(2), 298-304.

McGuire, T. (1989, Summer). Combining demand- and supply-side cost sharing: The case of inpatient mental health. Inquiry, 26(2), 292-303.

Mechanic, D. (1990, Winter). Treating mental illness: Generalist versus specialist. Health Affairs, 9(4), 61-75.

Mechanic, D. (1989, Summer). Assumptions in economic modeling of the mental health services system. Inquiry, 26(2), 304-306.

Mendez, E. (1992, January 8). Coordinated Care Program. [Letter to the Secretaries of the Army, Navy and Air Force].

Mittemeyer, B. (1983, November). Federal medical chiefs on progress and plans: Army Medical Department. Military Medicine, 148(11), 833-840.

Optenberg, S. (1992, April 1). Detailed Analysis of CHAMPUS Per Capita Mental Health Expenditures For Beneficiaries Less Than Age Eighteen, Health Services Command Catchment Areas, Fiscal Years 1988-1991 (Report No. 92-006). Fort Sam Houston, TX: United States Army Health Services Command.

Optenberg, S. (1991, April 1). Department of the Army CHAMPUS Mental Health Expenditures Per Eligible Beneficiaries Less Than Eighteen Years: Fort Stewart, GA, Fort Campbell, KY, Fort Bragg Catchment Areas (Report No. CR91-001). Fort Sam Houston, TX: United States Army Health Services Command.

Piha, J. (1988, October). Psychosocial coping in young adulthood of male child psychiatric outpatients: Implications of early treatment. American Journal of Orthopsychiatry, 58(4), 524-531.

Pinkert, M. (November 5, 1991). Mental health care: the challenge for hospitals. Hospitals, 65(21), 76.

Roback, G., Randolph, L. & Seidman, B. (1990). Physician Characteristics and Distribution in the U.S. Milwaukee, WI: American Medical Association.

Rodriguez, A. (1984). Special treatment needs of children of military family members. In F. Kaslow & R. Ridenour (Eds.) The Military Family: Dynamics and Treatment (pp.46-73). New York, NY: Guilford Press.

Shadle, M. & Christianson, J. (1989, November). The impact of HMO development on mental health and chemical dependency services. Hospital and Community Psychiatry, 40(11), 1145-51.

Sharfstein, S. (1990, August). Utilization management: Managed care or mangled care? American Journal of Psychiatry, 147(8), 965-6.

Sharfstein, S., Dunn, L., Kent, J. & Flanigan, L. (1989, October). The economic impacts of a CHAMPUS denial. Hospital and Community Psychiatry, 40(10), 1012-1013, 1016.

Smith, B. (1990, June). Controlling costs for inpatient CHAMPUS psychiatric care: Alternative outpatient treatment for inpatient care. Unpublished manuscript.

Smith, T. (1990, June). Implementation of an outpatient child and adolescent psychiatric clinic at Brooke Army Medical Center - A cost comparative analysis. Unpublished manuscript.

Srabstein, J. (1983, February). Geographic distribution of military dependent children: Mental health resources needed. Military Medicine, 148, 127-132.

Staff. (1990). Annual Survey: American Hospital Association guide to the health care field. Chicago, IL: American Hospital Association.

Staff. (1990). U.S. Army Health Services Command [Special issue]. HSC Mercury, 15(7), 11.

Taube, C. & Goldman, H. (1989, Summer). State strategies to restructure psychiatric hospitals: A selective review. Inquiry, 26(2), 146-156.

Tischler, G. (1990, August). Utilization management of mental health services by private third parties. American Journal of Psychiatry, 147(8), 967-973.

Van Meter, W. & Rioux, D. (1990, January-March). The case for shorter residential alcohol and other drug abuse treatment of adolescents. Journal of Psychoactive Drugs, 22(1), 87-8.

Weithorn, L. (1988). Mental hospitalization of troublesome youths: An analysis of skyrocketing admission rates. Stanford Law Review, 40( ), 773-838.

White, K. & Shields, J. (1991, June). Conversion of inpatient mental health benefits to outpatient mental health benefits. Hospital and Community Psychiatry, 42(6), 570-572.

Woolston, J. (1991). Psychiatric inpatient services for children. In M. Lewis (Ed.)., Child and Adolescent Psychiatry: A Comprehensive Textbook (890-894). Baltimore, MD: William & Wilkins.

Zimmerman, D. (1990, Spring). Notes on the history of adolescent inpatient and residential treatment. Adolescence, 25(97), 9-38.

## Appendix A. EAMC Utilization Management Plan

DDEAMC MEMORANDUM
No. 40-9

22 AUG 1990

Medical Services
DWIGHT DAVID EISENHOWER ARMY MEDICAL CENTER (DDEAMC)
UTILIZATION MANAGEMENT (UM) PLAN

1. PURPOSE: This memorandum constitutes the DDEAMC Utilization Management Plan and describes local administration of the DDEAMC UM Program in compliance with the requirements set forth in current Army Regulations and UM Standards in the Accreditation Manual of Hospitals (AMH) of the Joint Commission on Accreditation of Healthcare Organizations (JCAHO). The purpose of the UM Program is to assure appropriate allocation of the Medical Center's resources by striving to provide quality patient care in the most cost-effective manner by addressing overutilization, underutilization, and inefficient scheduling of resources.

2. OBJECTIVES: The DDEAMC UM Program is ongoing and is designed to identify and solve utilization related problems and permit the institution to make maximum effective use of personnel, monetary and space resources.

a. The UM Program will identify problem areas through retrospective and concurrent review of the following areas:

(1) Appropriateness of admissions.

(2) Availability of care.

(3) Access to care.

(4) Manpower (staffing).

(5) Allocation of resources.

(6) Cost containment activities.

(7) Productivity.

(8) Implementation of length of stay norms.

*This memorandum supersedes DDEAMC Memo No. 40-9, dtd 19 Apr 88.

## Appendix A. EAMC Utilization Management Plan

(9) Discharge planning.

(10) Budget.

(11) Equipment.

(12) Facilities.

b. The UM Program will plan for future needs and activities of the Medical Center to provide up to date care by effectively assessing implementation of the following:

(1) New diagnostic equipment and procedures.

(2) New therapeutic equipment and procedures.

(3) New missions in patient care.

3. RESPONSIBILITIES (overseeing mechanism): The UM Program is decentralized in operation, and is Command directed.

a. The Chief of each clinical department and separate service will:

(1) Identify utilization management indicators to be monitored and evaluated in his/her respective Quality Assurance (QA) Plan appropriate to the scope of his/her activity, and in accordance with this UM Plan, current Army Regulation and the current JCAHO AMH.

(2) Address UM indicators and subsequent compliance or problems in his/her respective QA Committee meeting minutes.

(3) Coordinate with Patient Administration Division and Resource Management Division for supporting data sufficient to perform monitoring and evaluation (M+E) of resource utilization.

(4) Resolve or refer unresolved UM problems by his/her QA Committee minutes through the UM Committee to the MEDCEN QA Committee.

(5) Document UM activities using the format outlined in the MEDCEN QA Plan.

b. The Chief, Patient Administration Division will:

(1) Maintain and support UM efforts of the clinical departments/services by timely furnishing (statistical) data appropriate to their needs.

## Appendix A. EAMC Utilization Management Plan

(2) Serve as a member of the MEDCEN Utilization Management Committee.

(3) Perform studies, audits or projects in support of UM activities at the discretion of the DCCS/Chairperson, UM Committee.

c. The Chief, Resource Management Division will:

(1) Maintain and support UM efforts of the clinical departments/services by timely furnishing (statistical) data appropriate to their needs.

(2) Serve as a member of the MEDCEN Utilization Management Committee.

(3) Perform studies, audits or projects in support of UM activities at the discretion of the DCCS/Chairperson, UM Committee.

(4) Prepare and present the monthly Review and Analysis. Provide departmental review and analysis data to department chiefs for review and appropriate action.

d. The Quality Assurance/Risk Management Office (MEDCEN QA Coordinator) will:

(1) Coordinate the MEDCEN UM Program to assure MEDCEN-wide integration.

(2) Serve as consultant on the UM Committee.

e. The UM Committee will function in accordance with guidance published in the current DDEAMC Regulation 15-1, Boards, Councils and Committees.

f. The DCCS will:

(1) Direct the functions of the UM Committee and MEDCEN UM activities.

(2) Serve as the Chairperson of the UM Committee.

(3) Address unresolved UM problems to the Commander through the Executive Committee to obtain resolution.

(4) Provide clerical support to record, transcribe and maintain UM Committee minutes and correspondence.

g. The DCCS will coordinate and direct the support of UM Committee recommendations regarding the allocation of resources

Appendix A. EAMC Utilization Management Plan

in support of the quality and appropriateness of patient care, to include personnel, budgetary, equipment and supplies, and space.

4. SCOPE: The DDEAMC UM Program transcends department/division/ separate service/committee boundaries and integrates all disciplines which provide patient care or impact upon the delivery of patient care to include the US Army Health Clinics at Fort McPherson, Georgia, and Fort Buchanan, Puerto Rico.

5. PROCEDURE:

a. The medical staff through its departmental organization monitors and evaluates the functional objectives noted in paragraph 2a above. Within each departmental budget resources are shifted to maximize effective care within that department and reported at the departmental QA meeting. Interdepartmental problems and opportunities to improve care are reported to the Hospital Utilization Management Committee for discussion and forwarding to the Executive Committee for implementation.

b. The Hospital Utilization Management Committee serves as the focal point to bring all departmental and interdepartmental concerns to discussion with the medical staff and project the sustainment and development of the Medical Center for the future as outlined in paragraph 2b above. Specific hospital-wide parameters such as total length of stay, patient appointment system function and Discharge Planning Committee reports will be presented at this committee.

c. Total Quality Management (TQM) will be instituted and implemented at this institution, predominantly through the Utilization Management Committee and its reporting committees with the organizational facilitation of TQM Steering and Process Action Teams, as well as quality circles.

d. Written length of stay norms for hospital stay will be those approved by Health Services Command for implementation in MTFs. These are attached as an appendix to this plan and will be used for assessment of discharge planning.

e. The Commander of the Medical Center monitors and evaluates the allocation of resources of the Medical Center through the following committees which send courtesy reports to the Utilization Management Committee for review: The Review and Analysis Program, Program Budget Advisory Committee (PBAC), Space Committee and ad hoc budget committees for pharmacy, personnel and equipment upgrade.

Appendix A. EAMC Utilization Management Plan

f. Medical staff, nursing and administration representation is on all committees reporting to the Utilization Management Committee, which itself is a multi-disciplinary committee chaired by the Deputy Commander for Clinical Services.

g. The PBAC and Utilization Management Committees will report recommendations to the Executive Committee which, through the Commander, has the authority to approve recommendations for action.

6. CONFIDENTIALITY POLICY:

The confidentiality policy applicable to the management of the MEDCEN UM Program and Plan will be in accordance with the current Army Regulation and will assure that patients and health care providers are not identifiable in any UM Committee minutes and/or supporting documents. The Utilization Management program is a portion of the Medical Center's Quality Assurance program. As such, all reports, investigations, minutes, and reviews are privileged from disclosure, discovery, and admissibility as provided by Title 10 United States Code, Section 1102.

7. CONFLICT OF INTEREST POLICY:

The conflict of interest policy applicable to the management of the MEDCEN UM Program and Plan will be in accordance with current Army Regulation(s) and will assure that health care providers do not review the medical records and/or documents of his/her own patients to determine quality or appropriateness of care or utilization of MEDCEN resources. UM Committee members will withdraw from discussion and abstain from voting on agenda items for which they have a personal interest that would be in conflict with those outlined in the current AR 600-50, Standards of Conduct for Department of Army Personnel.

8. ANNUAL EVALUATION:

a. This UM Program and Plan will be evaluated annually by the UM Committee and revised as appropriate to reflect findings of the UM activities of the MEDCEN.

b. Following the evaluation any proposed changes to the plan will be submitted in writing as an enclosure to the UM Committee

## Appendix A. EAMC Utilization Management Plan

minutes to the Executive Committee and the Commander. The proposed changes will be enclosed with the appropriate Executive Committee minutes.

The proponent of this memorandum is the Deputy Commander for Clinical Services. Users are invited to send comments and/or suggested improvements to the Commander, DDEAMC, ATTN: DCCS, Ft Gordon, GA 30905-5650

FOR THE COMMANDER:

OFFICIAL:

PHILIP L. DORSEY
Colonel, MS
Chief of Staff

ROBERT W. PRIOR
Chief, Administrative Services

DISTRIBUTION:
B

## Appendix B. HMS Letter

March 12, 1992

Dear Administrator and Clinical Staff:

I am writing to give you the most recent information about the changes in CHAMPUS benefits and the procedures for obtaining the benefits.

The Office of the Assistant Secretary of Defense published the final rules containing these changes in the Federal Register on October 18, 1991, with an effective date of November 18, 1991, for those items not specifically contained in the Fiscal Year 1991 Defense Authorization and Appropriations Acts. This created two different effective dates for certain provisions. I want to take this opportunity to clarify the effective date of each provision.

Effective October 1, 1991, CHAMPUS inpatient mental health benefits are generally limited to 30 days per fiscal year (October 1, through September 30) for adults and 45 days per fiscal year for children and adolescents (under 19 years of age). The benefit for the care of children and adolescents in a residential treatment center is 150 days per admission or per fiscal year. While there is a congressionally mandated statutory presumption against the appropriateness of benefits beyond these limits, a waiver of these limits is possible, if care is medically necessary.

The legislative requirement that all non-emergency inpatient mental health care be pre-authorized also became effective October 1, 1991. Providers must notify Health Management Strategies International, Inc. (HMS), the CHAMPUS mental health utilization review contractor, before admitting CHAMPUS beneficiaries. During business hours, 8:00 AM to 6:00 PM Eastern Time, this may be accomplished by calling HMS at 1-800-242-6764. After business hours, HMS may be notified of admissions by telefaxing the enclosed request for authorization form to HMS at 1-800-722-0266 or 1-703-706-8630. Please note that these telefax numbers are for authorization requests only and that compliance with the request for authorization requirement does not guarantee certification of care.

Certification decisions for non-emergency admissions will continue to be based on clinical information regarding medical necessity and treatment at the appropriate level of care. One of the requirements for certification is that the individual diagnosis and treatment plan be under development at the time of admission. The plan must address the necessity for the admission, the required intensity of care, a comprehensive patient assessment, a specific treatment plan, family involvement, and discharge planning.

Emergency admissions do not require pre-authorization but providers must notify HMS within 72 hours of admission. If the patient's condition did represent a true medical emergency or if the admission is medically necessary and HMS is notified within 72 hours, CHAMPUS benefits will be approved from the date of admission. Early notification is strongly encouraged.

In reviewing admissions to determine if the patient's condition meets the CHAMPUS definition of a psychiatric emergency, the following criteria will be applied:

1. The medical record must clearly justify that the patient was, at the time of admission, at immediate risk of serious harm to self or others. This determination must be based on a psychiatric evaluation performed prior to admission by the admitting physician (or other qualified mental health professional with hospital admission authority).

## Appendix B. HMS Letter

2. The medical record must include documentation of the patient's immediate intent to commit harm. There must also be documentation that the patient requires immediate and continuous skilled observation and treatment at the acute psychiatric level of care.

It is especially important to note that pre-authorization does not fulfill the requirement for obtaining a Non-Availability Statement. All CHAMPUS beneficiaries residing within a catchment area (roughly, within a 40 mile radius of a military hospital) must obtain a Non-Availability Statement from the hospital commander before becoming eligible for the CHAMPUS funding of any non-emergency inpatient care.

Congress also mandated an "Economic Interest" provision effective Octo[illegible]r 1, 1991. Basically, this provision states that a provider with an economic interest in a facility may not admit a patient to the facility. The Department of Defense (DoD) has determined that a waiver of this provision is appropriate and available to providers. In order to obtain a waiver, a provider must advise HMS of the fact that there is an economic interest in the facility when pre-authorization is requested. A waiver will be granted upon such notification when there is demonstrated medical necessity for the admission. Providers who fail to give notice are subject to revocation of their status as a CHAMPUS authorized provider.

November 18, 1991, marked the implementation of a new appeals process for inpatient mental health services. The new process closely follows the Medicare Peer Review Organization appeals process. Under the new appeals system, providers should be aware that "Initial Determinations" (those decisions made in response to the original request for benefits) will be in writing and contain an explanation of the reason for the initial denial; notice of the waiver of liability provision; and information about the beneficiary's and provider's right to request a "RECONSIDERATION".

A reconsideration is the first step in the appeals process. No "Amount In Dispute" is required to request a reconsideration. This means that a beneficiary is no longer required to obtain care and have such care denied before accessing the appeals process. Beneficiaries and providers may appeal an initial determination based on:

1. The medical necessity and appropriateness of the services furnished or proposed.
2. The appropriateness of the level of care in which the services were or were proposed to be furnished.
3. The appealing party's financial liability for care provided.
4. The emergency nature of an admission.

If the beneficiary chooses to remain in the hospital after receipt of a Denial Notice, or if admission certification to an institution is denied prior to the patient being admitted, HMS will accept a written request for an expedited reconsideration from the beneficiary. The request must be submitted in writing within three working days of receipt of the Denial Notice. The request must specifically ask for an expedited reconsideration.

Providers requesting a reconsideration must submit a written request to HMS within 90 days of the date on the written initial determination. Requests received after this date will be denied.

In preparing a reconsideration request, providers are encouraged to support the clinical rationale for treatment decisions by including specific references to the medical record documentation of the symptoms and behaviors leading to treatment decisions. A copy of the medical record should accompany any reconsideration request. Reconsideration requests can be processed more quickly if

Appendix B. HMS Letter

The reconsideration decision is final for providers with one exception. The office of CHAMPUS will accept a provider's request for a "HEARING" only if the provider is appealing the fact that they could not have known that the services in question would not be CHAMPUS benefits and, as such, the provider should not be financially liable. There is a provider waiver of liability provision which states that if a provider could not have known that the care would not be reimbursable through CHAMPUS, then CHAMPUS will, in fact, pay for the otherwise non-covered services.

Extreme caution should be exercised in interpreting this provision! The pre-authorization and concurrent review processes allow providers the opportunity to know what care is covered; therefore, it is not expected that any situation will arise in which the provider "could not have known" that the care would not be covered. However, if a provider believes that this provision is applicable to a particular case, the provider may request a provider waiver of liability through the appeals process.

As published in the Federal Register on October 18, 1991, the beneficiary "Waiver of Liability" provision applies to all inpatient mental health care. Basically, this provision states that the beneficiary may not be billed for any denied services until:

1. The day following the beneficiary's receipt of the written denial by CHAMPUS or a CHAMPUS contractor (This is presumed to be five (5) days after the date of the notice.) or

2. The day following the beneficiary's signing a statement from the provider which specifically states the services which will not be reimbursed by CHAMPUS (general statements such as those signed at admission do not qualify) and the beneficiary agrees, in writing, to personally pay for the non-CHAMPUS reimbursable services.

Several providers have contacted HMS concerning the partial hospitalization benefit which was initially proposed by the DoD, but which was not included in the Final Rule. The DoD has determined that the expansion of CHAMPUS benefits to include psychiatric partial hospitalization should be postponed. However, DoD personnel are continuing to actively consider a partial hospitalization benefit. Additional information on a psychiatric partial hospitalization benefit is expected in the near future.

I understand that the changes to the CHAMPUS Program will have an impact on your internal operations. The Beneficiary and Provider Relations (BPR) staff at HMS is available to answer questions about program and procedural changes and to assist you as you respond to these changes. To reach the BPR staff, call 1-800-242-6764, extension 3200.

Sincerely,

Karen Berg

Karen Berg
Director
Beneficiary and Provider Relations

Appendix C. Resource Analysis and Planning System Catchment Area Population Projections for FY87-FY99.

| Fiscal Year | Dependents of Active Duty | Dependents of Retirees | Survivors | Totals |
|---|---|---|---|---|
| FY91 | 9729 | 3568 | 291 | 13588 |
| FY92 | 9162 | 3603 | 295 | 13060 |
| FY93 | 8595 | 3632 | 296 | 12523 |
| FY94 | 8034 | 3663 | 298 | 11995 |
| FY95 | 7487 | 3693 | 299 | 11479 |
| FY96 | 7480 | 3728 | 303 | 11511 |
| FY97 | 7473 | 3767 | 303 | 11543 |
| FY98 | 7473 | 3811 | 311 | 11595 |
| FY99 | 7473 | 3854 | 315 | 11642 |

## Appendix D. Health Services Command Business Plan Memorandum

HSRM-M (340d) 2 APR 1992

MEMORANDUM FOR Commanders, HSC MEDCENs/MEDDACs

SUBJECT: Fiscal Year (FY) 1993 GATEWAY TO CARE Implementation and Business Plans

1. References:

a. Memorandum, HSC, HSRM-M, 8 October 1991, subject: GATEWAY TO CARE Business Plan.

b. Memorandum, HSC, HSCL-M, 24 January 1992, subject: GATEWAY TO CARE Initial Milestones.

c. Electronic Mail Message, HSC, HSCL-M, 25 March 1992, subject: Fiscal Year (FY) 1993 GATEWAY TO CARE Business Plans.

2. We provided the above references as guidance to implement the GATEWAY TO CARE (GTC) program and to develop your Business Plan which authorizes use of Civilian Health and Medical Programs of the Uniformed Services (CHAMPUS) funds for certain designated GTC initiatives. Reference 1c, above, amended the submission date for FY 93 Implementation and Business Plans to 1 May 1992 and promised a sample format to help you prepare your plans.

3. The enclosure is the promised sample format. All sites, except for those operating under the CHAMPUS Reform Initiative, will submit their FY 93 plans through their region commanders, who after review will forward the plans to Commander, U.S. Army Health Services Command, ATTN: HSCL-M, Fort Sam Houston, TX 78234-6000. All plans must receive final approval by Commander, U.S. Army Health Services Command, before we authorize FY 93 CHAMPUS funds for any GTC proposal. Experience shows that sites which provide personnel to workshop their plans with our staff prior to presentation for approval experience fewer delays. These discussions have been helpful for both parties allowing an opportunity for questions and clarification. In that light, everyone should expect considerable Department of Defense (DOD) and Congressional interest as to how we implement GTC within the command. The sample format is intended to help standardize presentations and document our process for future audit review. Also, we are working to develop measurable criteria to scorecard your GTC program successes or hiccups. You will be able to review and comment prior to final criteria selection.

Appendix D. Health Services Command Business Plan Memorandum (Continued)

HSRM-M
SUBJECT: Fiscal Year (FY) 1993 GATEWAY TO CARE Implementation and Business Plans

4. The sample format displays an Implementation Plan focused on the seven GTC Essential Elements. The Business Plan includes population, staffing, funding, and CHAMPUS cost data, along with your GTC financial initiatives and supporting analysis. This format is intended to be a guide, not restrictive. You may prefer to modify these displays and use additional graphs, charts, or materials to present your case. However, please ensure each initiative's supporting analysis utilizes the summary sheet and financial/time phasing worksheets. Include in your planned GTC proposals those ongoing FY 92 Alternate Use of CHAMPUS Funds (AUCF) projects to be implemented or continued in FY 93.

5. Currently, we do not have authority to modify the implementation and report documentation now required for AUCF projects. We will pursue obtaining DOD approval to modify AUCF project requirements in view of our GTC program implementation. Our hope is to receive DOD authority in time to avoid submitting current AUCF documentation and any formal submission of your GTC Business Plan initiatives. If authority is not granted, additional guidance will follow in time to meet existing AUCF submission requirements.

6. Since complete FY 92 CHAMPUS cost data will not be available by 1 May 1992, you may use either FY 90 data or partial FY 92 data projected over the full year to develop GTC proposal cost comparisons. Ensure data displays are October through September in constant FY 92 dollars. If you utilize FY 90 data, use a 15 percent inflation rate to convert to constant FY 92 dollars. In those few instances where utilization management, health care advisor, primary care, or another GTC essential element activity expense cannot be absorbed within your existing Operation and Maintenance, Defense (OMD) authority, you may propose CHAMPUS funds be used for implementation. Do not utilize one large "overhead" initiative, as often used in FY 92, to request such funds. Rather, show these required costs by essential element activity. Show how these GTC activities reduce CHAMPUS where appropriate; otherwise, sufficient recovery costs should exist from your other proposals to cover these expenses. Should economic analysis justify a proposal which would eliminate/reduce a current in-house service, you should identify the resources released or redirected to other in-house services (i.e., site closes its obstetrics service, arranges for a contracted provider, and redirects in-house funding and manpower to defer CHAMPUS cost growth in other services).

Appendix D. Health Services Command Business Plan Memorandum (Continued)

HSRM-M
SUBJECT: Fiscal Year (FY) 1993 GATEWAY TO CARE Implementation and Business Plans

7. Although we simplified the GTC proposal preparation, an annual assessment will occur for each new renewal initiative. A 2-year trial period should normally be sufficient to demonstrate whether an initiative warrants retention. Those projects which require a longer "pay back" evaluation will be addressed on a case-by-case basis. Bottomline: Except for those underfunded GTC activities mentioned above, each proposal must result in an annual CHAMPUS cost reduction. We will measure business success on obtaining quality care with CHAMPUS cost recovery. To modify your FY 93 Business Plan data or initiate additional proposals once more complete FY 92 CHAMPUS data becomes available, you may submit documentation to Commander, U.S. Army Health Services Command, ATTN: HSCL-M, requesting an adjustment to your plan. As your various GTC initiatives mature, we envision those warranting permanent retention would be transferred, with matching funds, to your direct care OMD funding authority during the biannual budget/Program Objective Memorandum Process preparation. Resourcing permanent GTC proposals within OMD authority is desirable to preclude complicating our accounting procedures as you develop other follow-on initiatives.

8. Our points of contact are:

a. Implementation Plans--Colonel Beumler, Office of the Deputy Chief of Staff for Clinical Services, DSN 471-8771.

b. Business Plans--MAJ Jaehne, Office of the Deputy Chief of Staff for Resource Management, DSN 471-6353.

FOR THE COMMANDER:

PHILIP L. DORSEY
Colonel, MS
Chief of Staff

Encl

Appendix D. Health Services Command Business Plan Memorandum (Continued)

Fort Swampy

GATEWAY TO CARE

FY 93 IMPLEMENTATION and BUSINESS PLANS

Appendix D. Health Services Command Business Plan Memorandum (Continued)

Fort Swampy

# FY 93 IMPLEMENTATION PLAN

ENROLLMENT
UTILIZATION MGMT
OUTCOMES STUDY
PRIMARY CARE

LOCAL DESIGN
STF/REGION PLAN
MARKETING/EDUCATION

Appendix D. Health Services Command Business Plan Memorandum (Continued)

IMPLEMENTATION PLAN

**SITE:** FT. SWAMPY

**GTC ESSENTIAL ELEMENTS:**

I. ENROLLMENT

A. Automation Support (ADP):

B. Panel Assignment (PNL):

C. Registration (REG):

D. Enrollment (ENR):

II. UTILIZATION MANAGEMENT

A. Utilization Management (UMP):

B. Case Review Manager (CRM):

III. OUTCOMES STUDY AND MANAGEMENT

A. Outcomes Study Plan (OSP):

B. Outcomes Studies in Progress (OSI):

IV. PRIMARY CARE CASE MANAGER AND FOCUS

A. Primary Care Source (PCS):

B. Health Care Advisor (HCA):

V. LOCAL DESIGN AND IMPLEMENTATION

A. Preferred Provider Network (PPN):

VI. SPECIALTY TREATMENT FACILITIES AND REGIONS OF EXCELLENCE

A. Specialty Treatment Facilities (STF):

B. Consultation/Support Services (CSS):

VII. MARKETING AND EDUCATION

A. Marketing Program (MP):

B. Education Program (EP):

Note: State your subjective response of Red, Amber and Green. Use short comments in narrative or bullet format for elaboration. Plan may be presented as typed document or as charts/graphs.

Appendix D. Health Services Command Business Plan Memorandum (Continued)

Fort Swampy

FY 93

BUSINESS

PLAN

POPULATION

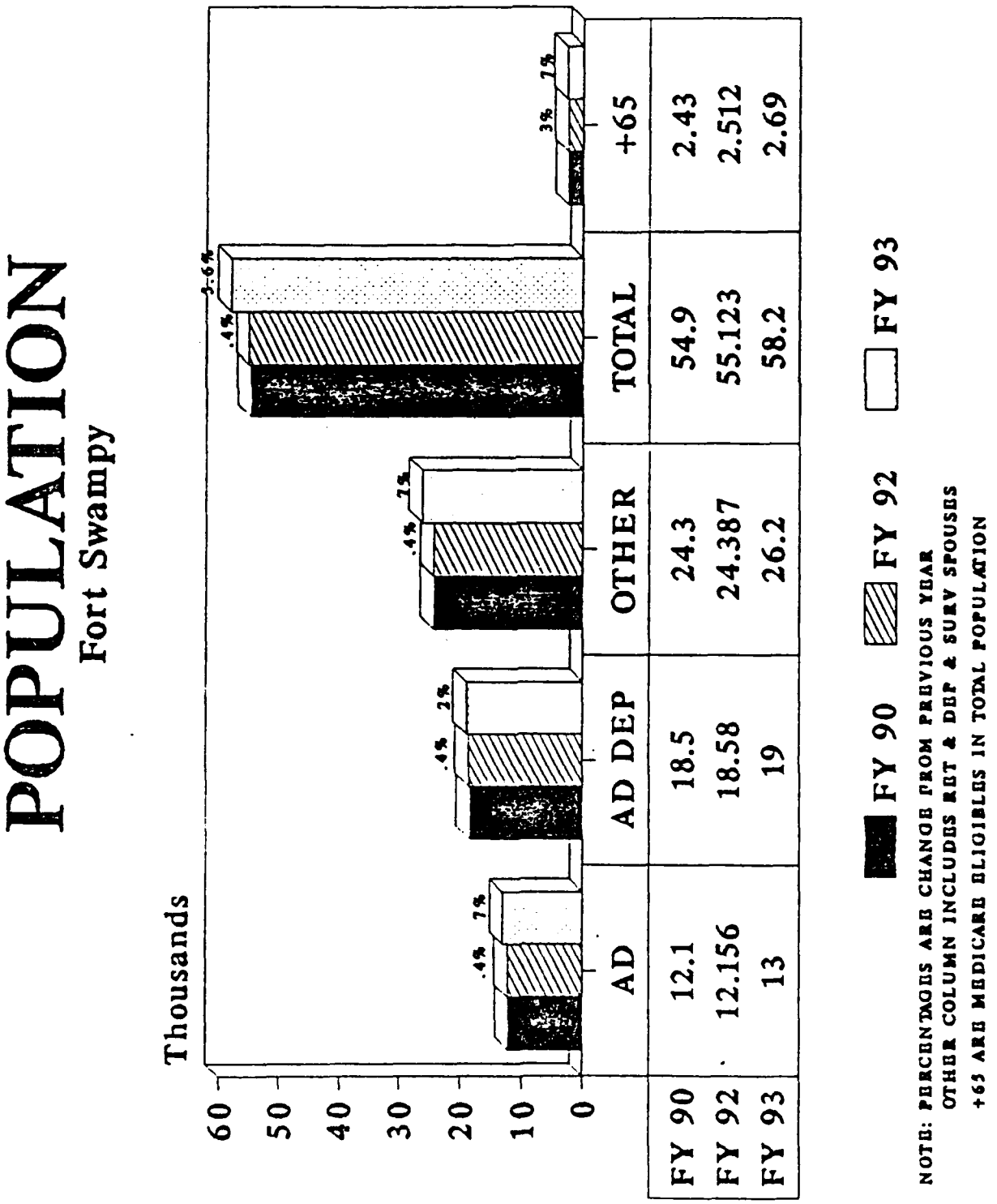
STAFFING

SOURCE OF FUNDS

CHAMPUS COSTS

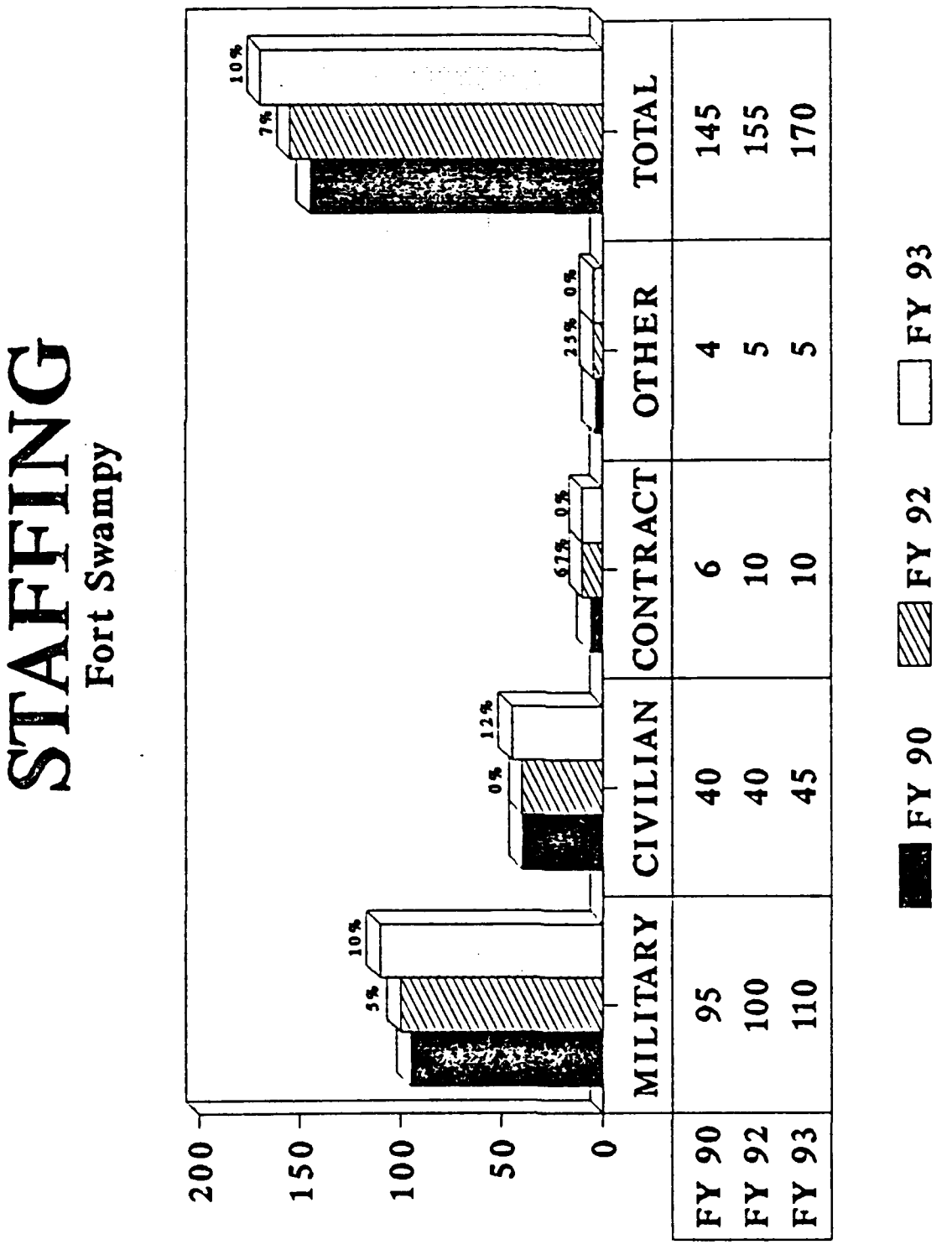
GTC PROPOSALS

Appendix D. Health Services Command Business Plan Memorandum (Continued)



Appendix D. Health Services Command Business Plan Memorandum (Continued)

Appendix D. Health Services Command Business Plan Memorandum (Continued)



# FY 92 MANPOWER

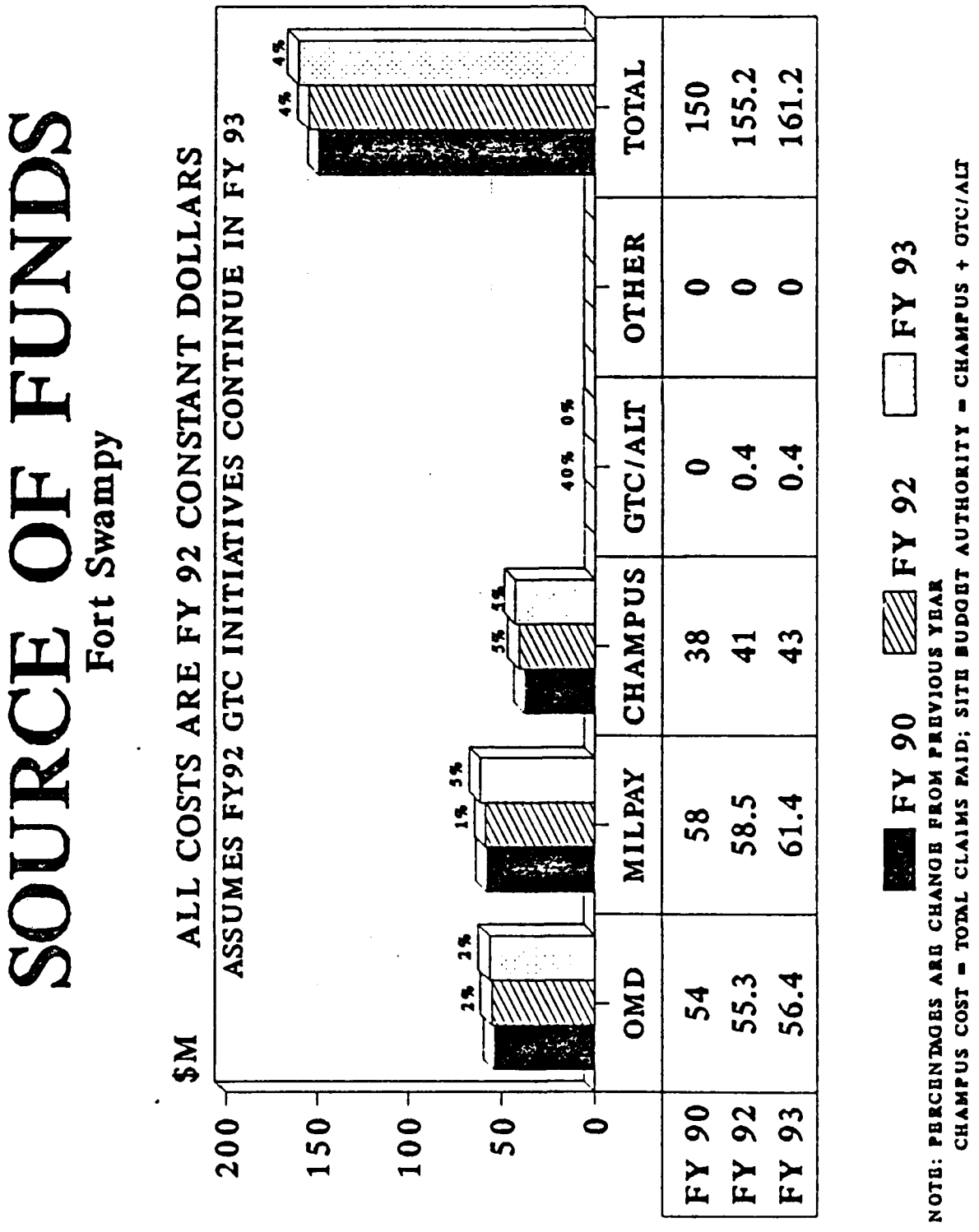
## Fort Swampy

| | MIL | CIV | CNT | OTH | TOT |
|---|---|---|---|---|---|
| *MEDICAL* | | | | | |
| PHYSICIAN | 9 | 3 | 2 | | 14 |
| NURSE | 18 | 8 | 2 | | 28 |
| PA | 4 | | | | 4 |
| STAFF | 51 | 26 | 6 | | 83 |
| *DENTAL* | | | | | |
| DENTIST | 3 | | | | 3 |
| STAFF | 8 | 2 | | | 10 |
| *VET* | | | | | |
| VET | 2 | | | | 2 |
| STAFF | 5 | 1 | | | 6 |
| *OTHER* | | | | 5 | 5 |
| *TOTAL* | 100 | 40 | 10 | 5 | 155 |

- HIGHLIGHT ISSUES OR PROBLEM AREAS
-
-

NOTE: FIGURES SHOULD REFLECT FULL TIME EQUIVALENTS (FTE)

Appendix D. Health Services Command Business Plan Memorandum (Continued)




| | OMD | MILPAY | CHAMPUS | GTC/ALT | OTHER | TOTAL |
|---|---|---|---|---|---|---|
| FY 90 | 54 | 58 | 38 | 0 | 0 | 150 |
| FY 92 | 55.3 | 58.5 | 41 | 0.4 | 0 | 155.2 |
| FY 93 | 56.4 | 61.4 | 43 | 0.4 | 0 | 161.2 |

Appendix D. Health Services Command Business Plan Memorandum (Continued)

# PRIMUS PROGRAM

Fort Swampy

PROVIDE DATA ON:

OPERATIONS

PRIMUS FUNDS TO OMD FUNDING

WORKLOAD

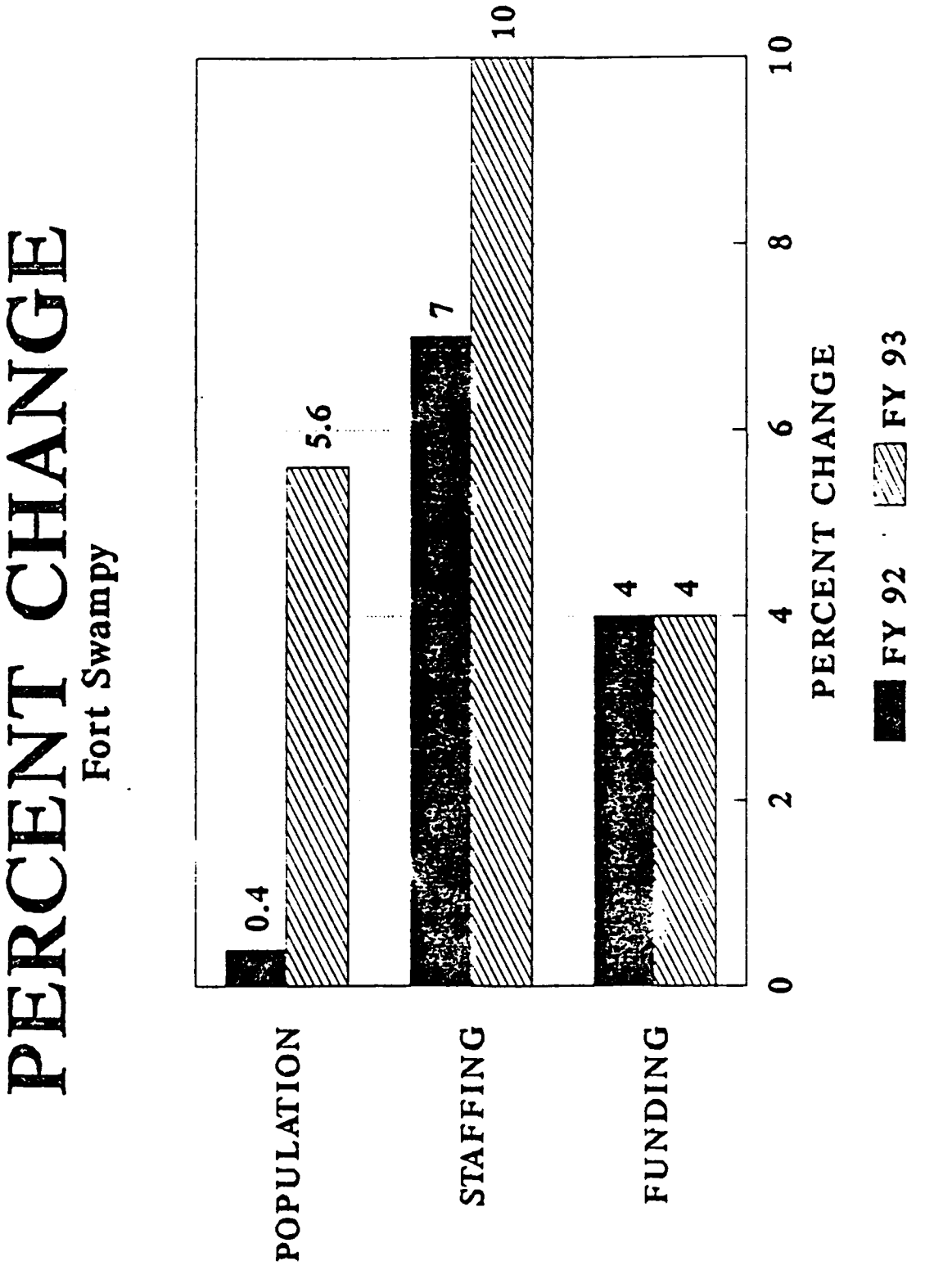
CONTRACTUAL ARRANGEMENT (CAP OR NOT)

HOW YOU TRACK COSTS

OTHER PERTINENT INFORMATION

(DELETE THIS CHART IF NOT APPLICABLE)

Appendix D. Health Services Command Business Plan Memorandum (Continued)



Appendix D. Health Services Command Business Plan Memorandum (Continued)

INFO ONLY.

**APPENDIX G**

**CAPITATION BUDGETING PROCEDURES**
**GATEWAY TO CARE/COORDINATED CARE PROGRAM**

**DIRECT CARE OMA**

**NON-CAPITATED**

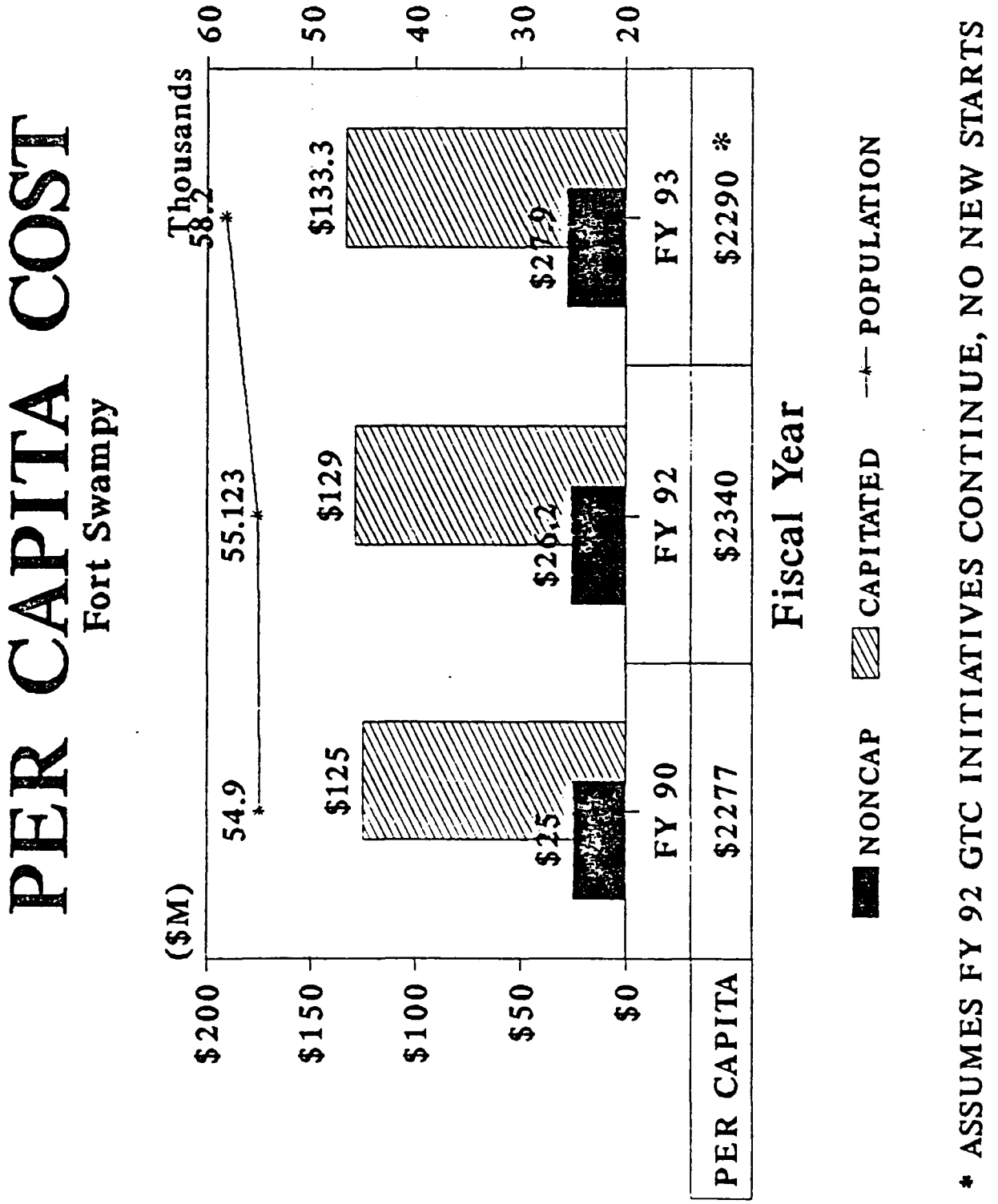
TRAINING
ACQUISITION
AREA LABS
OPTICAL
BLOOD
DRUG TEST
CLIN INVESTIGATION
VETERINARY
CATASTROPHIC SUP CARE
VISUAL INFORMATION
MINOR CONSTRUCTION
OUTLYING CLINICS
DENTAL
SITE PREP
RPMA
BASOPS(-)
RELOCATION
CEEP
ENVIRONMENT
PO&T

**CAPITATED**

MEDCEN CORE MDEP
MEDDAC CORE MDEP
CHAMPUS
EFMP
PRIMUS
DHCPP
NAS OUTPATIENT
CHAMPUS MGT
AIDS/HIV
FAMILY PRACTICE
CHAMPUS RECAPTURE
INFO MANAGEMENT
OCCUPATIONAL HEALTH
ALTERNATE USE
HEALTH FITNESS
DRUG PREVENTION

DEFINITION TO SEPARATE COSTS FOR PER CAPITA SLIDE.

Appendix D. Health Services Command Business Plan Memorandum (Continued)



Appendix D. Health Services Command Business Plan Memorandum (Continued)

# FY 93 GTC PROPOSALS

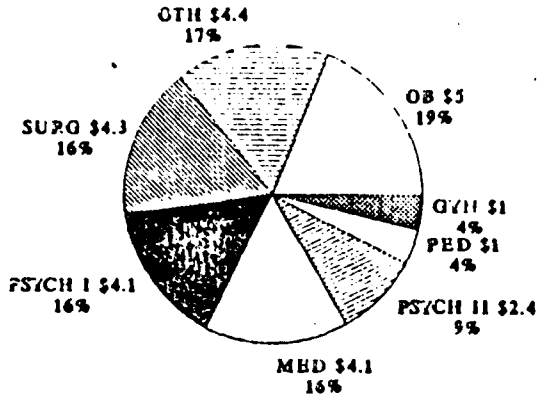
Fort Swampy

| ($000s) | FY 93 | FY 94 |
|---|---|---|
| ● PSYCHIATRY * | 2,200 | 960 |
| ● UTIL MGMT * | 0 | 0 |
| ● SURGERY | 2,850 | 540 |
| ● OBSTETRICS | 1,650 | 0 |
| *NET RECOVERY* | 6,700 | 1,500 |

* FY 92 RENEWAL INITIATIVES

# FY 92 CHAMPUS

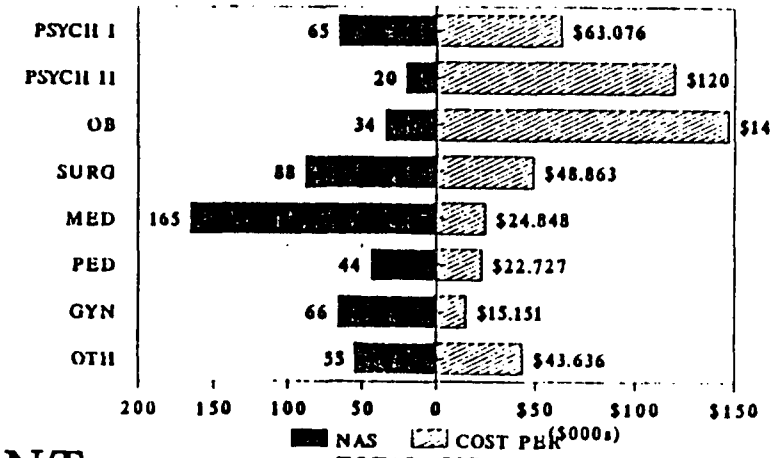
1)




AL: $26M

## INPATIENT

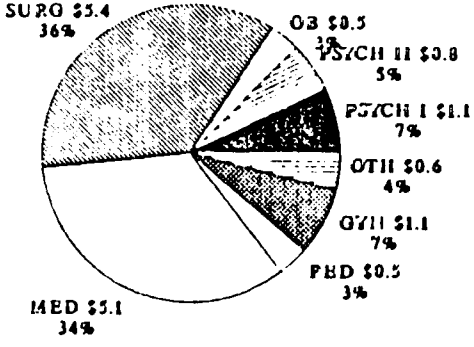
NAS




TOTAL: 537

($M)

1)




TOTAL: $15M

## OUTPATIENT

| | NAS |
|---|---|
| GYN LAPAROSCOPY | 21 |
| CATARACT REMOVAL | 13 |
| GI ENDOSCOPY | 4 |
| MYRINGOTOMY/TYMPONOSTOMY | 9 |
| ARTHROSCOPY | 32 |
| DILATION & CURET | 5 |
| TONSIL & ADENO | 22 |
| CYSTOSCOPY | 11 |
| HERNIA REPAIR | 7 |
| NOSE REPAIR | 30 |
| LIG/TRANS OF FALLOPIAN TUBES | 15 |
| STRABISMUS REPAIR | 14 |
| BREAST MASS/TUMOR EXCISION | 4 |
| NEUROPLASTY | 2 |
| TOTAL | 189 |

Appendix D. Health Services Command Business Plan Memorandum (Continued)

# GTC PROPOSALS

Fort Swampy

FY 92

PSYCHIATRY ★

UTIL MGMT

FY 93

PSYCHIATRY

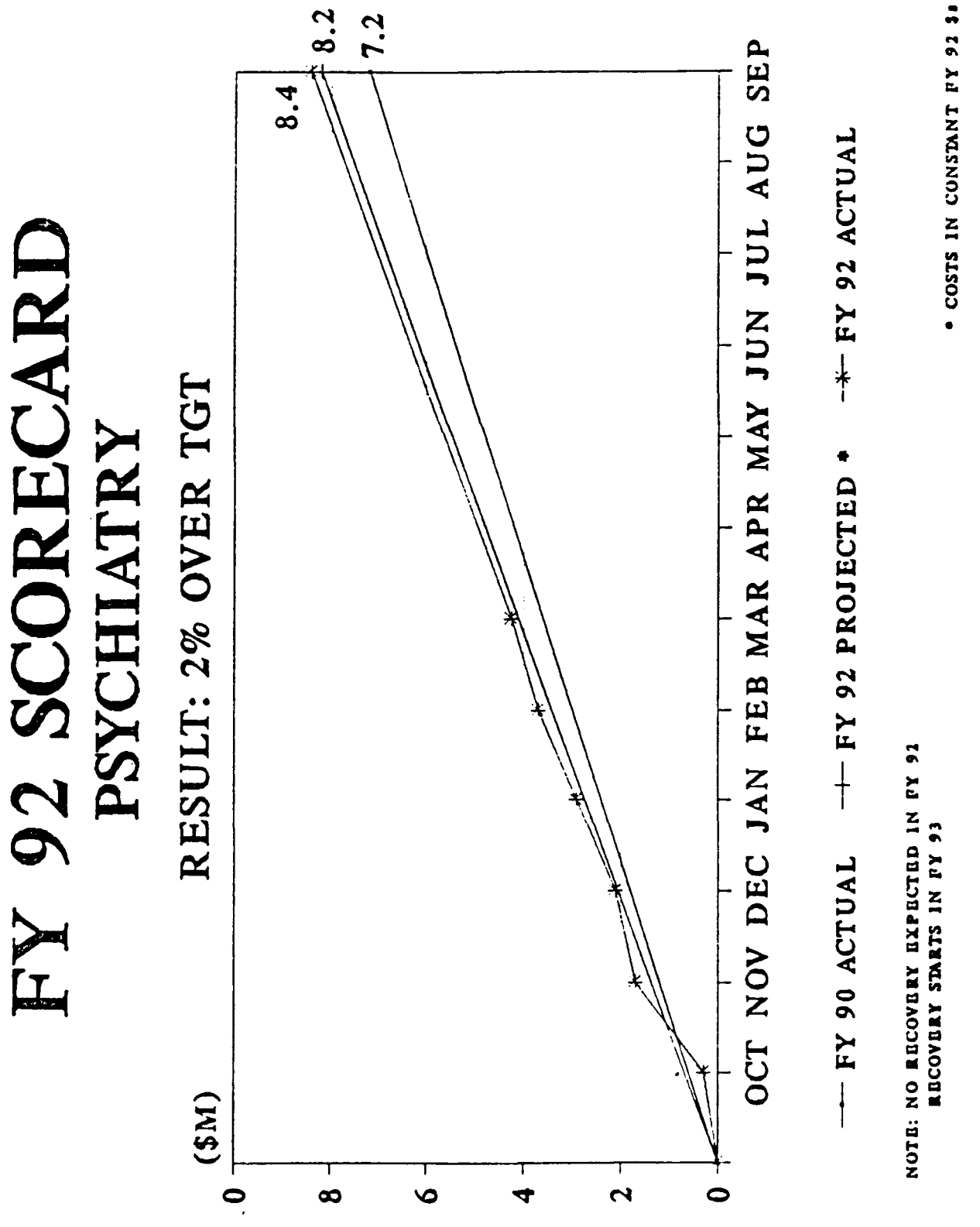
UTIL MGMT

SURGERY

OBSTETRICS

★ ALTERNATE USE

Appendix D. Health Services Command Business Plan Memorandum (Continued)



Appendix D. Health Services Command Business Plan Memorandum (Continued)

# FY 92 SCORECARD

## UTIL MGMT

INITIATIVE: TO HIRE 3 PERSONNEL

3 PERSONNEL HIRED

PROJECT IS ...

COSTS ON TARGET

NO NEED TO EXPAND

WILL TRANSFER COSTS TO OMD IN FY 94

ESTIMATED IMPACT

INTERNAL/EXTERNAL

Appendix D. Health Services Command Business Plan Memorandum (Continued)

# PSYCHIATRY

Fort Swampy

| ($000s) | FY 92 | FY 93 | FY 94 |
|---|---|---|---|
| CHAMPUS | 8,400 | 5,200 | 2,000 |
| INHOUSE | 300* | 1,300 | 3,540 |
| TOTAL | 8,700 | 6,500 | 5,540 |
| *NET RECOVERY* | | 2,200 | 960 |

RENEWAL OF FY 92 ALT USE INITIATIVE

FY 93: $1M INHOUSE TO RECAPTURE $3.3M PSYCH I

FY 94: CONTRACTS PSYCH II WORK AT 70% CHAMPUS

CHAMPUS FUNDS AUTHORIZED IN FY 92, NO WORKLOAD INCREASE

OTE: 8400 CHAMPUS = PSY I(4100 INP + 1100 OUTP) + PSY II (2400 INP + 800 OUTP)

# UTILIZATION MGMT

Fort Swampy

| ($000s) | FY 92 | FY 93 | FY 94 |
|---|---|---|---|
| CHAMPUS | 0 | 0 | 0 |
| INHOUSE | 100 * | 100 | 100 |
| TOTAL | 100 | 100 | 100 |
| *ESTIMATED $ IMPACT* | | ? | ? |

- RENEWAL OF FY 92 GTC INITIATIVE
- FY 93: CONTINUES EFFORT; 3 STAFFERS PAY
- FY 94: SAME AS FY 93; FUNDING TRANSFERS TO OMD

* CHAMPUS FUNDS USED TO HIRE 3 PERSONNEL; OMD NOT AVAILABLE
ESTIMATED $ IMPACT: CHAMPUS RECOVERED/LIMITED GROWTH AREAS

# SURGERY

## Fort Swampy

| ($000s) | FY 92 | FY 93 | FY 94 |
|---|---|---|---|
| CHAMPUS | 9,700 | 4,850 | 2,150 |
| INHOUSE | 1,000 | 3,000 | 5,160 |
| TOTAL | 10,700 | 7,850 | 7,310 |
| *NET RECOVERY* | | 2,850 | 540 |

- NEW INITIATIVE: LARGE CHAMPUS COSTS
- FY 93: $2M FOR 50% CHAMPUS WKLD
- FY 94: CONTRACTS REMAINING OUTPAT ($2700) AT 80% RATE + 3,000 CARRYOVER

NOTE: 9700 CHAMPUS = 4300 INP + 5400 OUTP; 1000 INHOUSE IS OMD FUNDED

# OBSTETRICS

Fort Swampy

| ($000s) | FY 92 | FY 93 | FY 94 |
|---|---|---|---|
| CHAMPUS | 5,500 | 0 | 0 |
| INHOUSE | 750 | 4,600 | 4,600 |
| TOTAL | 6,250 | 4,600 | 4,600 |
| *NET RECOVERY* | | 1,650 | 0 |

- ❶ NEW INITIATIVE: LARGE CHAMPUS COSTS
- ❷ FY 93: CONTRACTS AT 70% CHAMPUS + 750 CARRYOVER
- ❸ FY 94: CONTINUES EFFORT; 70% CONTRACT

NOTE: 5500 CHAMPUS = 5000 INP + 500 OUTP; 750 INHOUSE IS OMD FUNDED

Appendix D. Health Services Command Business Plan Memorandum (Continued)

4. **Adjusted CHAMPUS Costs:**

| | | FY93 | | FY94 | |
|---|---|---|---|---|---|
| Inpatient | FY92 Ave Cost | _____ | | _____ | |
| | Admits (FY92-WKLD) | _____ | | _____ | |
| | * AD DEP | | _____ | | _____ |
| | * DEP RET | | _____ | | _____ |
| | * RET | | _____ | | _____ |
| | Adjusted Sub Tot | _____ | | _____ | |
| Outpatient | FY92 Ave Cost | _____ | | _____ | |
| | Visits (FY92-WKLD) | _____ | | _____ | |
| | * AD DEP | | _____ | | _____ |
| | * DEP RET | | _____ | | _____ |
| | * RET | | _____ | | _____ |
| | Adjusted Sub Tot | _____ | | _____ | |
| Adjusted Cost (Inpat+Outpat) | | _____ | | _____ | |

* Displays total admits/visits by beneficiary

5. **Recovery Costs:**

| | FY93 | FY94 |
|---|---|---|
| FY92 CHAMPUS Cost | _____ | _____ |
| Adjusted CHAMPUS Cost | -_____ | -_____ |
| Sub Total | _____ | _____ |
| Proposal Costs | -_____ | -_____ |
| Recovery | _____ | _____ |

Appendix D. Health Services Command Business Plan Memorandum (Continued)

PROPOSAL SUMMARY SHEET

**FACILITY/LOCATION:**

**PROPOSAL'S CLINICAL SPECIALTY:**

**PROJECT OFFICER:** _____ **POSITION:** _____
**PHONE:** _____ **FAX NUMBER:** _____

**1. Project Summary:**

**2. Existing CHAMPUS Costs:**

| | Inpatient Cost | Inpatient Admit | | Outpatient Cost | Outpatient Visit | |
|---|---|---|---|---|---|---|
| FY92 Claims | | | | | | |
| * AD DEP | | | | | | |
| * DEP RET | | | | | | |
| * RET | | | | | | |
| Average Cost | | | | | | |

* Displays total admits/visits by beneficiary

**3. Proposal Costs:**

| | FY93 | FY94 |
|---|---|---|
| Direct Hires (Pay) | | |
| Contracts | | |
| Supplies | | |
| Equipment | | |
| Facility Modification | | |
| Other | | |
| Total | | |
| | | |
| Workload Increase | | |
| Inpatient Admits | | |
| Outpatient Visits | | |

# SUMMARY

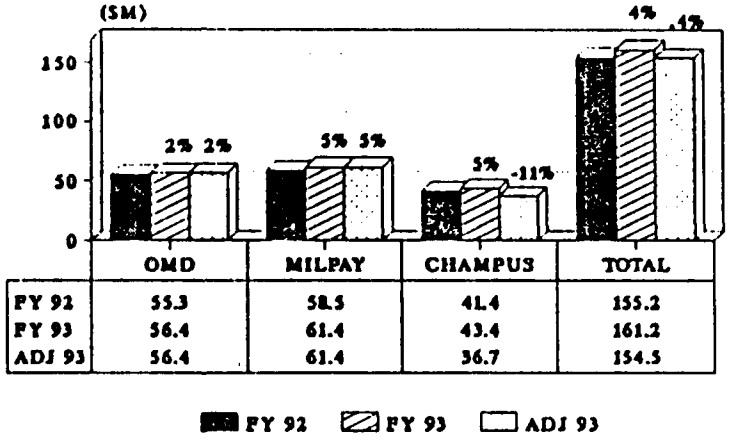
## Fort Swampy

### IMPACT
CHAMPUS SPENT ON GTC

| ;000s) | FY 92 | PROPOSED FY 93 | NET RECOVERY |
|---|---|---|---|
| SYCH | 300 | 1,300 | 2,200 |
| TIL MGT | 100 | 100 | 0 |
| URG | 0 | 2,000 | 2,850 |
| 'B | 0 | 3,850 | 1,650 |
| OTALS | 400 | 7,250 | 6,700 |

EDUCES ANNUAL COSTS 28%

### IMPACT
SOURCE OF FUNDING




| | OMD | MILPAY | CHAMPUS | TOTAL |
|---|---|---|---|---|
| FY 92 | 55.3 | 58.5 | 41.4 | 155.2 |
| FY 93 | 56.4 | 61.4 | 43.4 | 161.2 |
| ADJ 93 | 56.4 | 61.4 | 36.7 | 154.5 |

- CHAMPUS COSTS REDUCED 11% VICE UP 5%
- OVERALL COST HELD TO .4% VICE UP 4%

Appendix E. Additional Staff Necessary to Support a 10-Bed Child and 15-Bed Adolescent Unit at EAMC.

| Personnel | Quantity (in FTEs) | Grade | Individual Salary | Cost |
|---|---|---|---|---|
| Child Psychiatrists | 2 | GS-15-05 | $74,627.00 | $180,298.83 |
| Psychologists | 1 | GS-13-05 | $52,370.00 | $63,262.96 |
| Head Nurses | 2 | MIL - O4 (12 Years) | $40,008.00 | $98,822.88 |
| Unit NCOICs | 2 | MIL - E7 (14 Years) | $22,764.00 | $61,532.90 |
| Military Psychiatric Nurses | 4 | MIL - O2 (3 Years) | $27,288.00 | $130,504.32 |
| Psychiatric Nurses | 6 | GS-10-05 | $33,447.00 | $242,423.86 |
| Education Specialist | 2 | GS-10-05 | $33,447.00 | $80,807.95 |
| Social Workers | 2 | GS-11-05 | $36,747.00 | $88,780.75 |
| Counselors (Bachelors) | 6 | GS-09-05 | $30,370.00 | $220,121.76 |
| Recreational Therapist | 1 | GS-11-05 | $36,747.00 | $44,390.38 |
| Occupational Therapist | 1 | GS-11-05 | $36,747.00 | $44,390.38 |
| Licensed Practical Nurses | 6 | GS-05-05 | $20,046.00 | $145,293.41 |
| | | | TOTAL: | $1,400,630.38 |

NOTE: General Schedule employee costs were based on salary plus salary multiplied by 0.208 (as per Federal Personnel Manual (1991). Military personnel costs include the Basic Allowance for Quarters (with Dependents Rate) and the Basic Allowance for Subsistence.

## Appendix F. Additional Equipment Requirements (in Dollars) Necessary to Support a 10-Bed Child and 15-Bed Adolescent Unit at EAMC.

| Item of Expense | Quantity | Estimated Cost | Total Cost |
|---|---|---|---|
| Office, Break/Dining Room Furniture | | | |
| Assorted Desks | 10 | $ 400.00 | $ 4,000.00 |
| Assorted Chairs | 50 | $ 200.00 | $ 10,000.00 |
| Couches | 4 | $1,000.00 | $ 4,000.00 |
| Filing Cabinents | 4 | $ 300.00 | $ 1,200.00 |
| Book Cases | 12 | $ 150.00 | $ 1,800.00 |
| Computer Desks | 2 | $ 250.00 | $ 500.00 |
| Printer Stands | 6 | $ 150.00 | $ 900.00 |
| Activity Table | 2 | $ 75.00 | $ 150.00 |
| Folding Tables with Benches | 1 | $ 600.00 | $ 600.00 |
| Benches | 2 | $ 150.00 | $ 300.00 |
| Wall Units | 2 | $ 450.00 | $ 900.00 |
| | | SUBTOTAL: | $ 24,350.00 |
| Classroom Furniture | | | |
| Student Desks | 25 | $ 45.00 | $ 1,125.00 |
| Student Chairs | 25 | $ 18.00 | $ 450.00 |
| Teacher's Desk | 1 | $ 400.00 | $ 400.00 |
| Folding Activity Tables | 2 | $ 300.00 | $ 600.00 |
| Book Cases | 4 | $ 150.00 | $ 600.00 |
| Computer Desks | 5 | $ 250.00 | $ 1,250.00 |
| Printer Stands | 2 | $ 150.00 | $ 300.00 |
| | | SUBTOTAL: | $ 4,725.00 |
| Patient Room Furniture | | | |
| Beds, Captain's-Style | 25 | $ 275.00 | $ 6,875.00 |
| Desks | 25 | $ 150.00 | $ 3,750.00 |
| Chairs | 25 | $ 18.00 | $ 450.00 |
| | | SUBTOTAL: | $ 11,075.00 |

Appendix F. Additional Equipment Requirements (in Dollars) Necessary to Support a 10-Bed Child and 15-Bed Adolescent Unit at EAMC. (CONTINUED)

| Item of Expense | Quantity | Estimated Unit Cost | Total Cost |
|---|---|---|---|
| **Office Equipment** | | | |
| Telephones | 12 | $ 100.00 | $ 1,200.00 |
| Microcomputers with Software & Printers | 8 | $ 4000.00 | $ 32,000.00 |
| Dictation Equipment | 2 | $ 300.00 | $ 600.00 |
| Calculators | 4 | $ 50.00 | $ 200.00 |
| Miscellaneous (i.e. Pencil Sharpeners, etc.) | * | $ 150.00 | $ 150.00 |
| | | SUBTOTAL: | $ 34,150.00 |
| **Storage Room Equipment** | | | |
| Shelves | 4 | $ 200.00 | $ 800.00 |
| Locking Cabinents | 4 | $ 250.00 | $ 1,250.00 |
| | | SUBTOTAL: | $ 2,050.00 |
| **Television Monitoring Equipment** | | | |
| Cameras | 8 | $ 200.00 | $ 1,600.00 |
| Monitors | 2 | $ 400.00 | $ 800.00 |
| | | SUBTOTAL: | $ 2,400.00 |

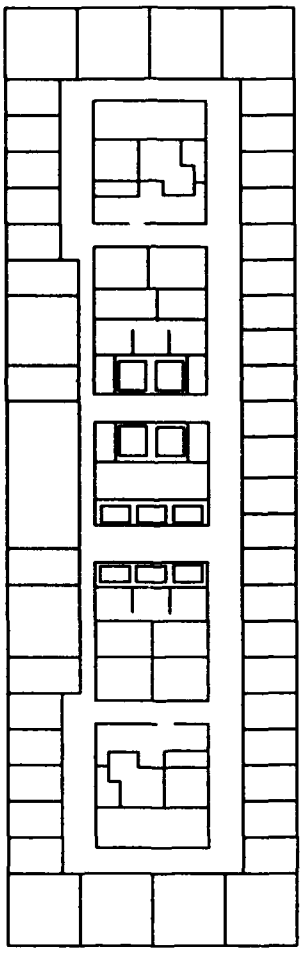
Appendix F. Additional Equipment Requirements (in Dollars) Necessary to Support a 10-Bed Child and 15-Bed Adolescent Unit at EAMC. (CONTINUED)

| Item of Expense | Quantity | Estimated Cost | Total Cost |
|---|---|---|---|
| Miscellaneous Arts/Crafts Supplies | * | $ 750.00 | |
| | | SUBTOTAL: | $ 750.00 |
| Miscellaneous Office Supplies | * | $ 250.00 | |
| | | SUBTOTAL: | $ 250.00 |
| Miscellaneous Classroom Supplies | * | $ 2000.00 | |
| | | SUBTOTAL: | $ 2,000.00 |
| Kitchen Equipment | | | |
| Microwave | 1 | $ 350.00 | $ 350.00 |
| Stove | 1 | $ 700.00 | $ 700.00 |
| Refrigerator/Freezer | 1 | $ 1500.00 | $ 1,500.00 |
| Lockable Wall Lockers | 2 | $ 150.00 | $ 300.00 |
| Dishwasher | 1 | $ 500.00 | $ 500.00 |
| | | SUBTOTAL: | $ 3,350.00 |
| General Use Audio-Visual Equipment | | | |
| Televisions | 6 | $ 400.00 | $ 2,400.00 |
| Video Tape Players | 6 | $ 350.00 | $ 2,100.00 |
| VHS Video Cameras | 2 | $ 1000.00 | $ 2,000.00 |
| Cassette Tape Recorder/Players | 4 | $ 50.00 | $ 200.00 |
| | | SUBTOTAL: | $ 6,700.00 |
| Text/Reference/Pleasure Books | * | $ 5000.00 | |
| | | SUBTOTAL: | $ 5,000.00 |
| | | GRAND TOTAL: | $ 96,800.00 |

## Appendix G. Construction Cost Estimate.

| ITEM | UNIT QUANTITY | UNIT COST | TOTAL COST |
|---|---|---|---|
| Security Screens | 34 EA | $ 7.90 | $ 268.60 |
| Painting | 24000 SF | $ 0.60 | $14400.00 |
| Carpeting | 1050 SY | $ 27.00 | $28350.00 |
| Underlayment | 1050 SY | $ 9.15 | $ 9607.50 |
| Flexible Partitions, Acoustical | 189 SF | $ 46.00 | $ 8694.00 |
| Chalkboards | 128 SF | $ 5.00 | $ 640.00 |
| Double Fire Rated Doors w Frames/Walls/Hardware | 5 PR | $2100.00 | $10500.00 |
| Single Accoustical Doors w Hardware | 2 EA | $2310.00 | $ 4620.00 |
| Single Fire Rated Doors w Frames/Walls/Hardware | 1 EA | $ 700.00 | $ 700.00 |
| Door Closures | 10 EA | $ 115.00 | $ 1150.00 |
| Reflective (One Way) Glass | 12 SF | $ 10.45 | $ 125.40 |
| Window Frame for Reflective Glass (3'6"x4') | 2 EA | $ 300.00 | $ 600.00 |
| Cabinets over Patient Stations (i.e. Hill-Rom Headwall series) | 40 EA | $2000.00 | $80000.00 |
| Accoustical Ceilings (Quiet Rooms) | 330 SF | $ 2.00 | $ 660.00 |
| Toilets (Quiet Rooms) | 2 EA | $ 850.00 | $ 1700.00 |
| Partitions for Toilets (Handicapped Accesible) | 4 EA | $ 752.00 | $ 3008.00 |
| Protected Lighting (Quiet Rooms) | 2 EA | $ 94.00 | $ 188.00 |
| Security Cameras | 4 EA | $ 469.95 | $ 1879.80 |
| Security Camera Monitors | 2 EA | $ 595.00 | $ 1190.00 |
| Security Camera Quadraplexor | 2 EA | $1295.00 | $ 2590.00 |
| Washer | 1 EA | $ 800.00 | $ 800.00 |
| Dryer | 1 EA | $1025.00 | $ 1025.00 |
| Basket Rack (Sharps/Personal Hygiene Items) | 25 EA | $ 25.00 | $ 625.00 |
| Outlet Covers | 18 EA | $ 5.00 | $ 90.00 |
| New Outlets | 8 EA | $ 40.00 | $ 3200.00 |
| Door Bells with Wiring and Ringers | 2 EA | $ 110.00 | $ 220.00 |
| Stainless Steel Mirrors | 16 EA | $ 70.00 | $ 1120.00 |
| Automatic Shut-Off Faucets | 16 EA | $ 110.00 | $ 1760.00 |
| Automatic Shut-Off Showers | 16 EA | $ 200.00 | $ 3200.00 |
| SUBTOTAL: | | | $182911.30 |
| Architectural & Engineering (Design)-(10% as per DIS) | | | $ 18291.13 |
| Inflation Add-in (5% of Gross Cost as per the Directorate of Industrial Services (DIS), Fort Gordon, Georgia) | | | $ 8841.57 |
| Clean-up Costs - (0.3% as per DIS) | | | $ 5487.34 |
| Contingency Fund (Estimated at 15% by DIS) | | | $ 26524.70 |
| GRAND TOTAL: | | | $242056.04 |

**Appendix H. A Single Line Drawing of The Seventh Floor of Eisenhower Army Medical Center.**

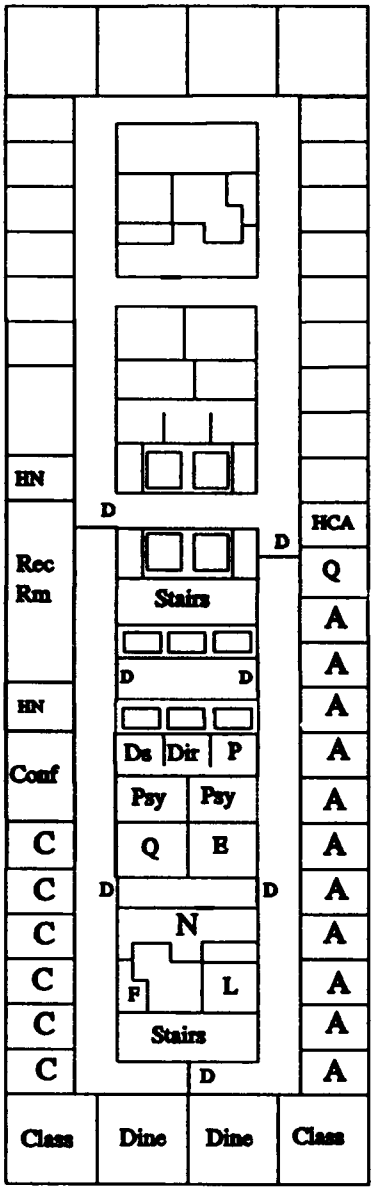


Appendix I. Space Requirements By Unit*.

| Space Required | Child | Adolescent |
|---|---|---|
| Classroom | 1 | 1 |
| Psychiatrists' Offices | 1 | 1 |
| Nursing Station (Shared) | 1 | 0 |
| Sleeping Rooms | 6 | 11 |
| Examination Room (Shared) | 1 | 0 |
| Unit Director's Office | 1 | 1 |
| Laundry Room (Shared) | 1 | 0 |
| Recreation Room (Shared) | 1 | 0 |
| Dining Area | 1 | 1 |
| Head Nurses'& NCOICs' Office | 1 | 1 |
| Conference/Group Room (Shared) | 1 | 0 |
| Quiet Room | 1 | 1 |
| Psychologist's Office | 1 | 0 |

*NOTE: Storage closets, and linen storage closets (both clean and soiled) are already in place and sufficient to met the needs of these units.

Appendix J. An Overlay of the Child and Adolescent Psychiatric Units on the Seventh Floor of Eisenhower Army Medical Center.




| | |
|---|---|
| A | Adolescent |
| C | Child |
| Class | Classroom |
| Conf | Conference Room |
| D | Door |
| Dine | Dining/Activity Room |
| Ds | Director's Secretary |
| Dir | Director |
| E | Examination Room |
| F | Food Station |
| HCA | Health Care Administrato |
| HN | Head Nurse |
| L | Laundry |
| P | Psychologist |
| Psy | Psychiatrist |
| Q | Quiet Room |
| Rec Rm | Recreation Room |